

EARLY CHILDHOOD DEVELOPMENT AND THE STATE SYSTEMS THAT SUPPORT IT:

An Introduction for Policymakers



With decades of research informing our understanding of brain science and the long-term impacts of targeted investment, one conclusion is increasingly clear: **the years of early childhood matter – both for children themselves and for society at large.** A working knowledge of this research is especially critical for policymakers, who hold the power to dramatically shape their states’ landscapes for young children and their families.

With the benefit of science, elected leaders are now rapidly discarding outdated notions regarding the adequacy of custodial “daycare” and the importance of children arriving at kindergarten “ready to learn” in favor of contemporary understandings that **children are born learning**, that **measurable achievement gaps are evident as early as infancy**, and that **the environments in which children spend their earliest years hold the potential to shape their long-term success** in meaningful ways.^{1, 2, 3}

This document is designed to introduce state policymakers to the fundamentals of brain science, the economic and societal benefits of public investment in early childhood, and key considerations for shaping their states’ early childhood systems.

The Developing Brain: Learning from Day One

The earliest years of life – and particularly **the period from prenatal to age three** – represent a unique **developmental window during which the fundamental architecture of the brain is wired**, largely in response to relationships and interactions with family members and early childhood teachers. What we commonly refer to as “brain development” is the process of creating connections between the nerve cells in the brain.

This process is never more active than **during the first three years of life** – where scientists at the Harvard Center for the Developing Child have estimated that **new neural connections occur at the rate of one million per second.**⁴

Babies are wired to understand the world from the ways they are cared for from birth. Every word spoken to them, every facial expression they see, and every interaction with

caregivers – both in and out of the home – helps to shape the foundation of their social/emotional, cognitive, and physical development.⁵

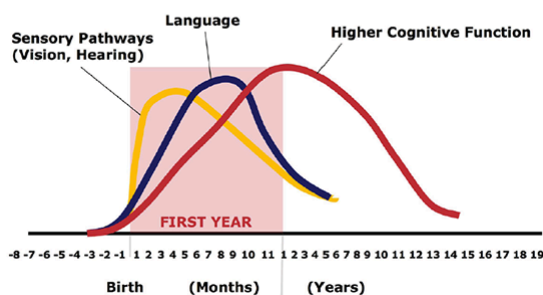
What does this mean for policymakers considering the long-term success and prosperity of their constituents and states? Put simply, **the first three to five years are of life-changing consequence.** With consistent exposure to nurturing, language-rich environments and loving, supportive adults, young children develop robust networks of neural connectivity that will serve to undergird their academic and life success for decades to come.

Exposure to Early Adversities Can Widen the Early Achievement Gap

While much attention has been paid to “the achievement gap” between our nation’s best and least prepared K-12 students, it is only in recent years that we have come to appreciate the extent to which **early learning and developmental disparities begin – and are measurable – as early as infancy**, particularly among children from challenged socio-economic backgrounds.

A 2009 study by Child Trends and the Council of Chief State School Officers (CCSSO), found that **disparities in the cognitive development, general health, and social-emotional development of low-income children are evident at 9 months and grow larger by 24 months of age.**⁶

Human Brain Development
Neural Connections for Different Functions Develop Sequentially

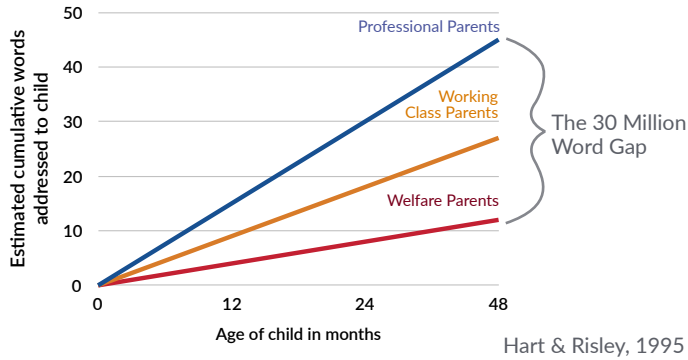


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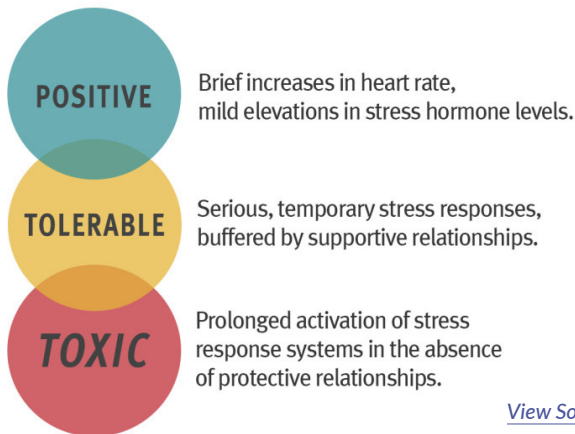
In another well-known study, Meaningful Differences in the Everyday Experiences of Young American Children (1995), authors Betty Hart and Todd Risley found that the **children of low-income families are exposed to over 30 million fewer spoken words by the age of three than their more advantaged peers.**⁷

Number of Words Heard by Children Differs Across Income Groups



[View Source](#)

While a key predictor of early developmental disparities, economic disadvantage is hardly the only factor which threatens the healthy and optimal development of the developing brain.



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Children exposed to frequent or prolonged stress – caused by physical or emotional abuse, neglect, caregiver mental illness or substance abuse, and domestic violence, just to name a few – may experience developmentally toxic effects. This is especially true of children who may lack the support of caring adults who are equipped with the appropriate resources, knowledge, and capacity to mitigate these stressors.

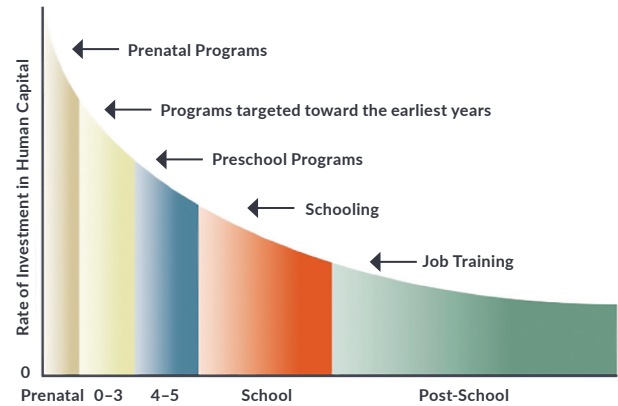
According to the Harvard Center for the Developing Child, such prolonged activation of the body’s stress response systems – labeled **toxic stress** – can disrupt development of

the brain’s architecture, and increase the risk of stress-related disease and cognitive impairment well into adulthood.⁸

Whether overcoming demographic risk, toxic stress, or both, many factors hold the power to subvert the optimal development of young children. **This is not only a personal tragedy for those involved but a public policy issue of significant consequence.**

The Economic Case for Early Childhood Investment: The Earlier the Better

Just as it is possible – but extraordinarily costly – to repair a home with a weak foundation, so too do some remedial programs show promise in closing the achievement gap. There is little question, however, that both children and taxpayers would be better served by preventing these gaps in the first place through the delivery of high-quality early childhood supports.



The “Heckman Curve” shows that investments have higher rates of return the earlier they are made in a person’s life.

[View Source](#)

Dr. James Heckman, a Nobel Prize winning economist at the University of Chicago, has dedicated much of his career to analyzing the economic effects of high-quality investments during the years of early childhood. Across multiple analyses, Heckman’s conclusion should be eye-opening to policy-makers: **for every \$1 spent on high-quality birth-to-five programs for disadvantaged children, taxpayers can expect a 13 percent per annum return on investment – with, perhaps not surprisingly – the greatest returns associated with programs at the earliest stages of life.**⁹

These returns come in the form of both immediate and long-term savings across the education and social service landscapes (reductions in retention, special education, welfare supports, and incarceration) and increases in employment and tax-paying ability, just to name a few.



Recently, Heckman partnered with High/Scope for a first-ever inter-generational analysis of the outcomes stemming from High/Scope’s Perry Preschool Project, a high-quality 1960’s preschool intervention offered in Ypsilanti, Michigan.¹⁰ After comparing the outcomes of both participants and control group for more than 50 years, Heckman’s analysis found not only that the preschool intervention increased the participants’ employment, health, cognitive and social-emotional skills, and reduced male participants’ criminal activity (especially violent crime), but **similar effects were now being seen decades later by the participants’ own children.**

Building an Effective State Early Childhood System: What do Young Children and Their Families Need?

Though often considered by policymakers in terms of classroom-based early education programs (pre-Kindergarten for four-year-olds, for example), the healthy development and needs of young children are best considered holistically, beginning prenatally and extending throughout the years of childhood. The good news for policymakers is that there are programs and leaders in your state with expertise in each aspect of what children and families need to thrive. **As an elected leader, you have the potential to make connections across these programs, rooted in communities and state agencies, that can ultimately lead to better coordinated supports to your youngest constituents and their families.** For this reason, it is important to take a systems approach.

An early childhood systems approach is one coordinating policies, programs and services; creating infrastructure; improving integration; and achieving scale in three key areas:

- **Early Learning and Development;**
- **Family Leadership and Support; and**
- **Health.**¹¹

The table below introduces each of these areas, along with specific state-level considerations associated with each.

<p>EARLY LEARNING AND DEVELOPMENT</p>	<ul style="list-style-type: none"> • Quality, affordable early learning opportunities from birth to school entry • Developmental screenings and early intervention • Adequate compensation, preparation, and professional development for early childhood workforce including elementary school teachers • Early learning standards and kindergarten entrance assessment
<p>FAMILY LEADERSHP AND SUPPORT</p>	<ul style="list-style-type: none"> • Home visiting • Paid family leave • Adult education and family literacy programs • Housing and tax policy
<p>HEALTH</p>	<ul style="list-style-type: none"> • Preventive and physical health via family-centered medical homes • Early childhood mental health services • Nutrition • Reduce maternal and infant deaths through interagency collaboration, helplines, and targeted actions to address racial disparities • Screen for and address toxic stress • Prevention of unplanned pregnancies

Through the deliberate and thoughtful integration of the key system components above, states can create high-quality early childhood systems, capable of addressing the complex, holistic needs of young children and their families.



Financing and Governing Early Childhood Services

Financing early childhood services at the state level is a complex proposition, typically entailing the braiding of federal and state funding. A number of significant federal funding streams exist to help states meet this critical responsibility, including:

- **The Child Care and Development Fund (CCDF) | \$5.2 billion, 2018:** CCDF is a federal and state partnership program authorized under the Child Care and Development Block Grant Act (CCDBG) and administered by states, territories, and tribes with funding and support from the Administration for Children and Families' Office of Child Care. States use CCDF to provide financial assistance to low-income families to access child care so they can work or attend a job training or educational program.¹²
- **Head Start | \$9.86 billion, 2018:** Head Start and Early Head Start provide comprehensive early learning and family support services to low-income children aged birth-five. Head Start funds are not administered directly by states, but rather channeled directed to community-level grantees by the federal government.¹³
- **The Individuals with Disabilities Education Act (IDEA) Part C and B | \$861 million, 2018:** The Individuals with Disabilities Education Act (IDEA) provides funding and oversight related to special education programming. In early childhood this entails both the Part C early intervention program for children from birth to age three (\$470 million) and IDEA Part B preschool grants for children ages three to five (\$391 million).^{14, 15}
- **Early Childhood Comprehensive Systems (ECCS) | \$6.1 million, 2018:** Funded by the federal Health Resources and Services Administration's (HRSA) Maternal Child Health Bureau since 2003, the Early Childhood Comprehensive Systems grants currently provide 10 states grants of up to \$426,600 apiece to support partnerships between agencies/organizations representing physical and mental health, social services, families and caregivers, and early childhood education to develop seamless systems of care for children from birth to kindergarten entry. (Current grants to: Alaska, Delaware, Hawaii, Indiana, Louisiana, Kansas, Massachusetts, New Jersey, New York and Utah).¹⁶
- **Maternal, Infant, and Early Childhood Home Visiting (MIECHV) | \$361 million, 2018:** The Maternal, Infant, and Early Childhood Home Visiting Program is designed to support pregnant women and families, particularly those considered at-risk, through the delivery of evidence-based home visiting models designed to develop children who are physically, socially, and emotionally healthy and ready for success.¹⁷
- **Title V Maternal Child Health Services Block Grant | \$651 million, 2018:** One of the largest federal block grant programs, Title V is a key source of support for promoting and improving the health and well-being of the nation's mothers, children, including children with special needs, and their families. The grant helps states to underwrite services including comprehensive prenatal and postnatal care, ongoing maternal/child health care, and health promotion efforts that seek to reduce infant mortality and the incidence of preventable diseases. Grant funds provide annual support to an estimated 56 million Americans. States and jurisdictions must match every \$4 of federal Title V money that they receive with at least \$3 of state and/or local money (i.e., non-federal dollars).¹⁸
- **Preschool Development Grants (Birth-Five) | \$250 million, 2019:** The current (Phase 1) PDG B-5 grants are designed to fund states to conduct a comprehensive statewide birth through five needs assessment followed by in-depth strategic planning, while enhancing parent choice and expanding the current mixed delivery system including child care centers and home-based child care providers, Head Start and Early Head Start, state pre-kindergarten, and home visiting service providers across the public, private and faith-based sectors. 46 states and territories are currently in the midst of this planning process, with subsequent implementation grants expected to be awarded to a smaller number of grantees.¹⁹

States routinely supplement these federal funding streams using both **general revenues** and a host of dedicated streams, ranging from **tobacco settlements** (Arizona, Connecticut, Kansas), to **sales taxes** (South Carolina), and **gambling and lottery revenues** (Georgia, Missouri).²⁰ Several states, including Utah and California, are testing



the use of **social impact bonds** (often referred to as “pay for success” models), in which private capital is used to create programs believed to generate long-term savings to taxpayers.²¹ Funders are repaid by the government when the program demonstrates such outcomes.

States take equally diverse approaches to early childhood systems governance, with some creating a dedicated, **cabinet-level children’s agency** or official with responsibility for coordination and others spreading responsibility for program governance across multiple agencies, with the support of a **State Advisory Council** or **Children’s Cabinet** responsible for ensuring inter-agency synergy.²² Still more have created public-private partnerships (North Carolina, Arizona, South Carolina) through which state and private funding is expended at the grassroots level by community-level non-profits. Whether administered within a single agency or many, state systems are most effective when policymakers ensure ongoing communication, collaboration, and coordination across these programs.

Creating an effective and efficient early childhood system is no small task. But with committed and knowledgeable policymakers engaged in the task, the benefits to both taxpayers and families can be significant.

Policy Recommendations and Questions for Consideration:

- Undertake a comprehensive review of public expenditures on children aged prenatal to three (with an eye toward the adequacy, quality, and holistic nature of these investments). Compare these expenditures to associated costs on retention and remediation. What might be saved by adopting a more preventative approach?
- Consider the current structure and governance of your state’s early childhood system. Does this structure lend itself to the efficient use of resources, interagency communication, and seamless service coordination? If not, what statutory or administrative changes might best advance your state system in these areas?
- Recognizing that optimal brain development is a product of loving and nurturing interactions with caregivers, both in and out of the home, consider formal efforts to support the learning of parents and promote the professional development and adequate compensation of teachers working with infants, toddlers, and preschoolers.



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