

MAINE STATE LEGISLATURE

The following document is provided by the
LAW AND LEGISLATIVE DIGITAL LIBRARY
at the Maine State Law and Legislative Reference Library
<http://legislature.maine.gov/lawlib>



Reproduced from scanned originals with text recognition applied
(searchable text may contain some errors and/or omissions)



Invest Early for 2020
Building the Foundation for Maine's Future



Principal Writer: Donna Overcash

With guidance, writing, editing, and other contributions from Sheryl Peavey, Lynn Davey, Cindy Han, Steve Rowe, Allyson Dean, Janine Blatt, Sue Mackey Andrews, Jan Clarkin, Pamela LaHaye, Leslie Forstadt, Judy Reidt Parker, Jon Madden

Graphic Design by Lisa Oakes, Lavender Designs



The Voice for Early Childhood

For more copies of this Report, contact the Maine Children's Growth Council:

c/o Maine Early Childhood Initiative

DHHS, State House Station # 11

2 Anthony Avenue

Augusta, ME 04333-0011

Website: www.MaineCGC.org

Email us at: info@MaineCGC.org

Join us on: Facebook

See videos at: Maine Children's Growth Council You Tube Channel

1st Revision, April, 2012

Table of Contents

Building the Foundation for Maine's Future	1
• How Our Brains are Wired	2
• How Caregivers Build Connections	3
• How Development is Disrupted	4
• Adverse Childhood Experiences	5
The Challenge for Maine	7
• The Economy and Maine's Youngest Children	8
• School Readiness for Maine Students	10
• Invest Now for the Greatest Returns	13
Setting the Course for Maine's Youngest Children	15
What is the Maine's Children Growth Council?	17
• The Early Childhood Comprehensive Systems Grant	17
• Snapshot of Council Accomplishments	18
How Do We Define the Early Childhood Comprehensive System?	19
Vision for Maine's Youngest Children by 2020	21
• Early Childhood Goals for Maine by 2020	21
• The Priorities of the Maine Children's Growth Council	24
• Screening	24
• Prevention	25
• Quality Workforce	26
• Shared Responsibility	27
• Communications and Awareness	28
Call to the Public	28
Appendix 1	29
Appendix 2	30
Endnotes	33



Building the Foundation for Maine's Future

Maine's unique quality of life is important to us and we want to preserve it for our children. We want to make sure they have the opportunity to live, work and raise their families here. Yet, given the stressors of our economy and the challenges currently facing so many Maine families, the future of our state and our children is in doubt.

The question before us is what can we do today to guarantee the future prosperity of our state's economy and its quality of life?

The answer to this question lies in every community throughout the state—everywhere there are young people. Maine's future prosperity—economic and otherwise—rests squarely on the well-being and success of its youngest children.

What happens early in life sets the foundation for all that follows. From progress in neuroscience, we now know that early experiences shape the architecture of the developing brain and lay the foundation for lifelong learning, behavior and health.¹



Brain Architecture

Like a house, the brain is built from the bottom up, step by step. As it emerges, the quality of that architecture establishes either a sturdy or fragile foundation for all the development and behavior that follows.



How Our Brains are Wired

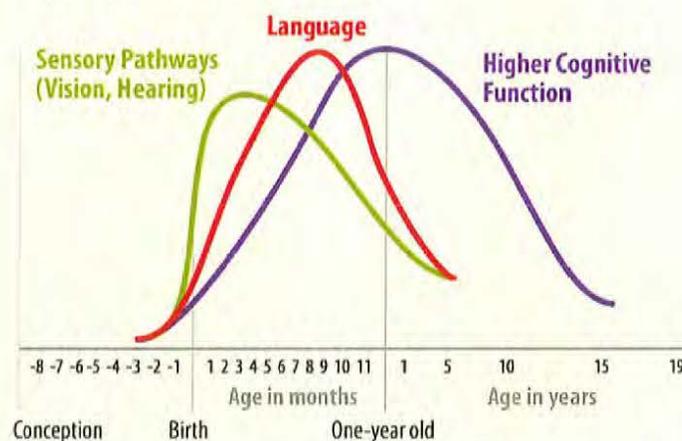
While genes provide the brain's basic blueprint, experiences shape the process that determines whether a child's brain structure will have a strong or weak foundation for future learning, behavior and health.²

During the early years, billions of neurons connect to wire our brains for motor skills, emotions, logic and memory.³ As the chart illustrates, brain development is greatest at very young ages. Circuits that process basic information are wired first: Sensory pathways for vision and hearing, and language and higher cognitive function have greatest growth in the first year of life.⁴

These connections grow at a warp speed and are made stronger through use. Like building a house, they provide the scaffolding for more complex circuits. And those that are used get more sturdy and powerful, while those that aren't used fade away. With repeated use, these connections become more efficient and link to other parts of the brain. Learning is faster, more effortless and more fun than it will ever be again.

HUMAN BRAIN DEVELOPMENT IS GREATEST AT VERY YOUNG AGES

Synapse Formation and Retraction



How Caregivers Build Connections⁵

Children grow up in an environment of experiences and relationships that literally build the brain. Forming strong brain architecture depends on something called “serve and return” interaction with adults, like in a game of volleyball. A young child’s gesture, babble or coo is the serve to an adult, who then returns by responding in meaningful ways.

This “serve and return” helps create the neural connections among all the different areas of the brain. For example, when a baby points to an object, such as a tree, and an adult responds by saying “tree,” this serve and return process wires the brain with essential foundational skills. Later, if a child points at a picture of a tree in a book, and an adult responds by saying “tree,” the child comes to understand the connection between the trees she sees and how trees are represented in words and pictures.

More complex skills, such as understanding written words on a page, are built on more basic skills such as naming an object. Ensuring that all children have adult caregivers who consistently engage in serve and return interactions builds the foundation in the brain for all the learning, behavior and health that follow.



Interactions

Child development relies on the “serve and return” process of relationships—the interactions that children have every day with caregivers at home and in their community.

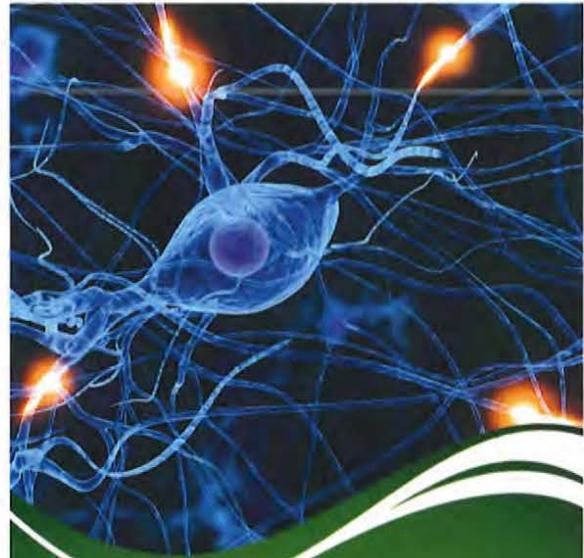


How Development is Disrupted⁶

Learning how to cope with difficulty can be an important part of healthy development. When we experience stress or adversity, our brain's stress response system is activated and goes on alert. When the stress is relieved, the stress response system winds down and the body returns to normal.

For young children, this return to normal depends upon the presence of supportive adult caregivers who can help relieve the stress a child experiences—whether the stress is normal and essential (positive), more severe and longer-lasting (tolerable) or strong, frequent and prolonged (toxic).

When caring adults are not present, stressful situations such as exposure to violence or neglect cause a child's stress response system to stay activated. Constant activation of the stress response overloads developing systems in the brain, leading to serious lifelong consequences. When the stress response system is set on high alert for prolonged periods, scientists call this toxic stress. Toxic stress can reduce important neural connections in areas of the brain, just when those connections should be growing. The release of stress hormones causes neurons to die off instead of making vital connections. To prevent toxic stress from harming children, we must promote environments that are nurturing, interactive and stable.



Toxic Stress

Like a toxin destroys an ecosystem, stressors—like chronic poverty and violence in the home and community—damage the wiring of young brains.



Adverse Childhood Experiences⁷

The incidence and effects of childhood trauma—also called Adverse Childhood Experiences (ACEs)—was the subject of a large-scale study from 1995–1997. In this study, 17,000 members of the Kaiser Permanente Health Plan (average age 57) were asked to complete a confidential survey that contained questions about childhood maltreatment and family dysfunction, as well as their current health status and behaviors.⁸

Childhood traumas they reviewed include: recurrent physical and emotional abuse, contact sexual abuse; physical and emotional neglect; and factors such as household members with alcohol and drug abuse, chronic depression, and mental illness; family members who were institutionalized, suicidal, or incarcerated; mother who was violently abused; and parents who were separated, divorced or in some way lost in early childhood.

Early Childhood Stress

Positive stress response is a normal and essential part of healthy development, characterized by brief activation of the stress response system. Some situations that might trigger a positive stress response are: the first day of child care, or receiving an injected immunization.

Tolerable stress response activates the stress response system to a greater degree as a result of more severe, longer-lasting difficulties, such as the loss of a loved one, a natural disaster or a frightening injury. If the activation is time-limited and buffered by relationships with adults who help the child adapt, the brain and other organs recover from what might otherwise be damaging effects.

Toxic stress response can occur when a child experiences strong, frequent and/or prolonged adversity—such as exposure to violence, physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, and/or the accumulated burdens of family economic hardship—without adequate adult support. This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for poor health and cognitive impairment, well into the adult years.

Study findings:

1. Adverse Childhood Experiences and, in particular the incidence of more than one, are vastly more common than what was previously known.
2. ACES have a powerful correlation to adult health even more than 50 years later. In fact, they are major risk factors for the leading causes of death, illness and poor quality of life.
3. The more ACES the person experienced the more likely the incidence of: smoking, alcoholism, chronic obstructive pulmonary disease, obesity, depression, attempted suicide, diabetes, intravenous drug use and heart disease.
4. Children with a greater number of adverse experiences are far more likely, as adults, to suffer from a variety of health and mental health problems. Their experiences include exposure to violence or neglect, lack of access to health care, hunger or inadequate nutrition, parents with mental health problems or chronic stress from financial insecurity, etc.

As the chart illustrates, Adverse Childhood Experiences can lead to disrupted neurodevelopment and social, emotional and cognitive impairment which lead to the adoption of health risk behaviors and ultimately disease, disability, social problems, and even death.

ACES clearly lead to problems that reduce the likelihood of an adult leading a successful, healthy, productive life. Reducing childhood trauma in order to reduce inequalities in opportunity down the line is an economic as well as a moral imperative. Research shows high quality early care and education yield the most significant positive outcomes for children who face a number of adverse early experiences.⁹



The Challenge for Maine

Many Maine families struggle to find steady, good paying jobs. At the same time, Maine employers find it difficult to fill jobs in areas such as health sciences, engineering and information technology because there simply aren't enough highly educated and skilled workers.

On the public policy level, policymakers are grappling with the high costs of health care, treatment services, and remedial education. Serious health and social problems like domestic violence, drug abuse and alcoholism demand expensive interventions and drive-up criminal justice and treatment spending.

Experts struggle with how to improve high school and college graduation rates knowing that the higher the educational level, the greater the earning power. Amid all of this, there is a daily debate on tax rates.

These problems will not reverse on their own, partly because Maine has the oldest population in the country, a low birthrate, and a high percentage of Mainers with low education and income. Maine's prosperity is directly linked to how we treat our youngest children. And poverty and lack of education are common denominators for many problems facing these children and their families.

Most Mainers are not aware of the significance of early brain architecture and the foundation it creates for future skills and behaviors. As a public, we don't value early childhood beyond the privacy of our own homes. Indeed, shortsighted public policies and cuts to vital programs and services for Maine's youngest children and their families will only threaten our future economy and the quality of life in Maine. Promoting early childhood experiences that are nurturing, stable, and interactive for all young children regardless of income or where they live, and preventing adverse experiences, can lift us above the negative trends occurring in our economy.

We need our youngest citizens to grow up strong, vital and prepared for the workforce.

The Economy and Maine's Young Children

There are about 70,000 children in Maine under age five—a population about the size of Lewiston and Bangor combined.¹⁰ Most of these children live in households where parents work full time, many at more than one job just to support their families.

Over the past 6 years, a greater number of Maine's youngest children have been living at or below the poverty level than in other New England states.¹¹ One in five infants, toddlers and preschoolers (about 15,000) lives with a family income of \$18,530 or less for a family of three.¹² Another 20,000 live in families with income slightly above the poverty line, but their families struggle to make ends meet (\$18,530-\$37,060/3).¹³ Nine out of 10 young children in Maine whose parents lack a high school degree live in low-income families.¹⁴ Three fourths of young children whose parents have only a high school degree live in low-income families.¹⁵

In Maine as well as nationally, children in low-income and poverty-level homes are much less likely to have access to quality early childhood programs that prepare them for success than are their middle-income peers. Only one in three children who qualify for Head Start receive it due to limited federal and state funding. Only about 25 percent of Maine's 4-year-old children are served in a public pre-K program. Only 15 percent of eligible families are served by the Maine Families home visiting program.¹⁶ (This will improve if Maine's new federal expansion grant for home visiting stays in place.)

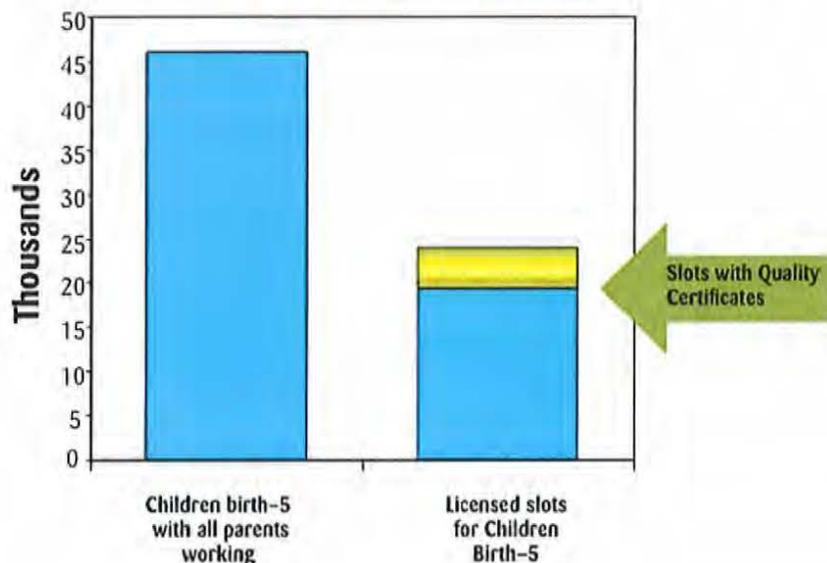
Half of Maine's Youngest Children are Low Income

Children under age 5	70,000	All income levels
Who live below poverty	15,000	Less than \$18,530 for family of 3
Who live at or above poverty level	20,000	\$18,530-\$37,060

The majority of Maine's families with young children need child care to work. The most current projection for Maine indicates about 46,000 infants, toddlers and preschoolers need child care while their parents work, look for work, or attend school or training programs. Even though this number often fluctuates with the economy, Maine's demand for child care far outweighs the supply of licensed child care providers. As of November, 2011 there were 711 licensed centers and 1347 licensed family child care homes. For more information on licensed programs go to <http://gateway.maine.gov/childcare>.

Child care programs that have achieved high quality certification is even more dramatically lacking in numbers. As of November 2011, only 137 (29.6%) of the licensed child care centers including Head Start, and 35 (6.2%) of the family child care homes enrolled in the state quality rating system are at Maine's highest step in the quality rating scale.¹⁷ (NOTE: Only 65% of the licensed centers and 42% of the homes are enrolled in the state's quality rating system which is defined in the priorities section: Quality Workforce. Data about the degree of quality in child care programs is limited. The following chart which illustrates the lack of quality child care slots was provided by DHHS in 2004.)

Two-thirds of children under five live in families in which all parents work. Maine lacks adequate high quality care and education to meet the needs of these families.



School Readiness For Maine Students

A child's readiness for school is multi-faceted and includes acquiring skills and abilities in early language and literacy (communicating, listening, book knowledge and appreciation, sounds in spoken language, writing); personal and social development (self control, self concept, social competence); health and physical education (healthy habits and motor skills); and other traits, such as initiative and curiosity, persistence and reflection, scientific knowledge and awareness; and mathematical decision-making.¹⁸

One of the greatest predictors of a child's success or failure in school is the level of vocabulary when entering kindergarten. Until third grade, children are learning to read. After third grade, they are reading to learn. From this point on, a child relies on proficient reading skills to learn science, math, literature, social studies and more.

In Maine, a lack of early skill development is a problem for many students. Each year, about four out of ten students entering kindergarten in Maine arrive unprepared.¹⁹ These four- and five-year-old children have physical, social, emotional and cognitive limitations that could have been prevented or successfully treated before their first day of school.

"Skill begets skill; motivation begets motivation; motivation cross-fosters skill and skill cross-fosters motivation."

"Early development of effective social skills greatly influences the successful development of IQ and ultimately, personal and social productivity. If a child is not motivated to learn and engage early on in life, the more likely it is that when the child becomes an adult, (the child) will fail in social and economic life."

James Heckman, Harvard economist and Nobel Laureate

Serious systems problems hampering child success are the availability of reliable data and the lack of comprehensive early childhood screening and assessment information. This leads to a gap in what we know about our infants, toddlers and preschoolers. Maine lacks a comprehensive statewide system of identification of problems and special needs that successfully increases the number of children who receive prevention and intervention services when it is most effective. Many children do not receive screenings or assessments in their medical homes that are made available to practitioners and providers of prevention services. There is no statewide, standardized screening tool used by school systems to determine school readiness at the kindergarten door. Some new registering kindergarten children transfer to schools with no screening information from their previous school. Among schools who perform screening, school superintendents use different tools albeit standard ones, such as Brigance, Peabody, Dial 3 and AIMSWEB, while others devise their own tools.²⁰

According to research and Maine testing data, we know that children who start behind tend to stay behind. Skills developed in the early years make it easier—and more effective—to learn work and life skills later. By fourth grade,

30 percent of all Maine students can't read at the basic level, and a disturbing 67 percent can't read at a proficient level.²¹ These rates are even higher if you separate out low-income children.

Many Maine Children Can't Read

Can't Read at Basic Level	By 4th Grade	By 8th Grade
All Children	30%	20%
Low Income	43%	30%
Non Low Income	19%	12%

When children are not reading well by fourth grade, they are unlikely to improve in later years. By eighth grade, about 20 percent of Maine students can't read at the basic level, and about 62 percent are not proficient

readers.²² By eleventh grade, there are still 52 percent who are not proficient readers, as well as 54 percent who are not proficient in math.²³

Maine Youth Read Poorly

Can't Read Proficiently	By 4th Grade	By 8th Grade	By 11th Grade
All Children	67%	62%	52%
Low Income	80%	76%	No data
Non Low Income	57%	51%	No data

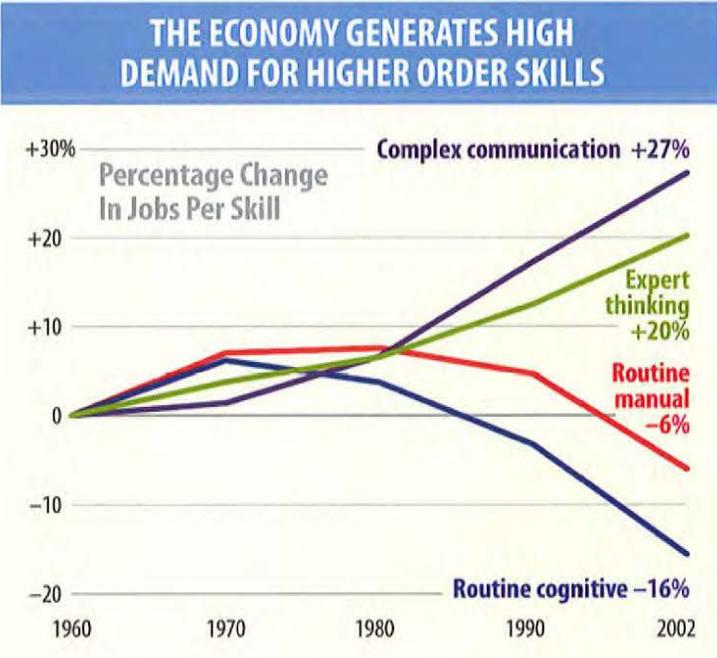
Further, the rate of students who start ninth grade but then do not graduate with their class is 20 percent.²⁴ Of the youth who go on to college, half of those who start community college require remediation, and nearly three quarters don't graduate with their peers. At the university level, 20 percent of students require remediation and 52 percent don't graduate on time.²⁵

Because skill begets skill, children with high quality early education experiences have the strong foundations that are so crucial to later

progress. Those children have more advanced speech and language skills, and are more likely to succeed academically and go on to college. Even for young adults who don't go to college, those with a high school degree fare better than those with GEDs or who did not finish high school. High school graduates earn higher wages, are more likely to be insured and seek preventive care, and have better overall health outcomes. High school dropouts earn, on average, less than \$20,000 year. And of all adults incarcerated in Maine prisons, more than half did not finish high school.²⁶

Economic success demands higher skills for the highly technological and competitive economy of the 21st century. Complex communication skills and expert thinking are in

more demand than routine cognitive skills in today's workplace. Demand for routine manual skills reduced by 6% from 1960 to 2002, as well.²⁷

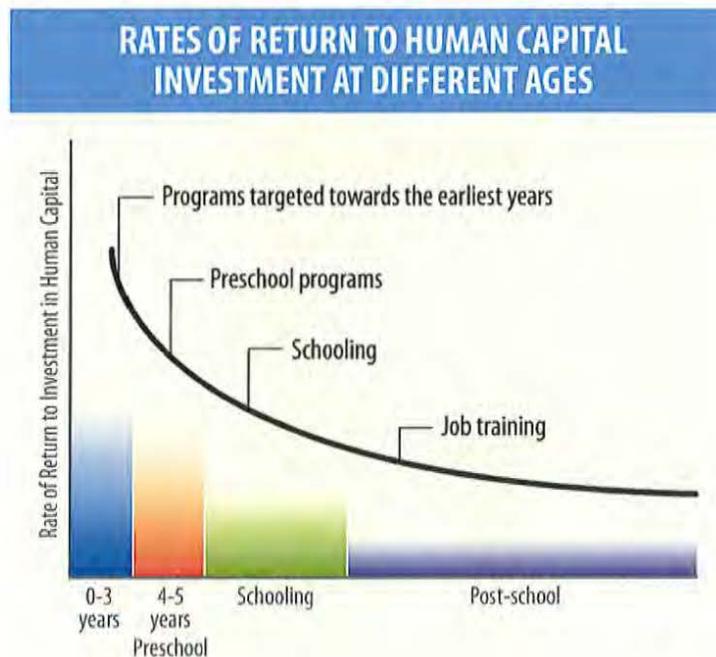


Invest Now for the Greatest Returns

The practice of early childhood education works. The quality of Maine's child care programs has long-term effects on the development of Maine children. Higher quality care provides better developmental outcomes for children from all backgrounds, particularly low-income children. We know from longitudinal research over the last 50 years that children who experience high-quality early care and education are more likely to be both physically and emotionally healthy, have greater language and literacy skills, succeed academically and attend college, and have higher earnings as adults.²⁸ That is because their brain architecture and

learning experiences were based on a strong foundation provided by their interactions with caring and skilled adults. The following chart, developed by Nobel Laureate Economist James Heckman, shows that the rate of return on investment is greatest with programs targeted from birth to three years of age.

The rates of return found in early learning and family support programs are significant—reputable studies put the return rate of these programs in a range of 3 to 17 times the investment.²⁹



In contrast, children who tend to need remedial education and/or drop out of school, who experience emotional and mental health problems, who engage in criminal behavior during their teenage and adult years tend not to have had high quality early education experiences. These negative outcomes are a significant cost to Maine.

The following table shows a current assessment of the treatment, remediation and institutionalization costs in Maine, much of which could be avoided with appropriate and effective early childhood programs and supports. One analysis using 2005-6 expenditure data estimated special education costs at \$215 per capita, corrections at \$139 per capita and public welfare at \$1,903 per capita.³⁰ While not all costs would disappear,

investments in family support, early learning and development, and parent and child health programs over time would certainly reduce costs to both our economy and our society.

There are very few social policies that do not have an impact on the health and well-being of Maine's youngest children. Some are obvious, such as healthy and interactive early care and education or access to affordable health care. Some are less obvious, such as the ways in which we provide services that support families and communities, or support caregivers in the early childhood workforce. Some require broader thinking, such as municipal zoning regulations that can make it easier for families to get fresh and healthy food.

Maine Taxpayer Costs for Lack of Prevention³¹

K-12 Special Education	\$300 million/year
Child Mental Health Services	\$60 million/year
Corrections	\$160 million/year
Substance Abuse	\$900 million/year
Domestic Violence	\$1.0 billion/year

Setting the Course for Maine's Youngest Children

Our task as Mainers is to ensure that all of these contexts of children's growth and development address a fundamental challenge: to promote health, reduce sources of toxic stress that children experience, and build healthy relationships in the environments in which they live and grow.

If Maine is to prosper in the future, we must provide all children the opportunity to develop physically, intellectually, socially and emotionally. That means we must create and support early childhood environments that set children on a steep developmental trajectory.



Getting it Right Early

Early childhood is a complicated time when cognitive, emotional and social development are tightly connected. Learning, behavior and physical and mental health are tied to this development. Getting things right the first time is easier and less costly than trying to fix them later.



The current economy has opened up new opportunities to change public conversation on issues we care about. It requires us to think “big picture” about new ways to look at old issues that have for far too long hurt Maine people—especially children.

The early years pave the way for the future. That’s why the Maine Children’s Growth Council is focused on determining how to best promote the healthy development of Maine’s youngest children.

Consider this...

By 2020, infants born in 2012 will enter the third grade. In 2017, they will enter kindergarten.

If Maine builds a high-quality comprehensive early childhood system, we will have laid a strong foundation and created the kinds of environments that protect against toxic stress. These children will have the opportunity to start school ready to succeed, avoid the need for high-cost, remedial education and treatment, and read proficiently by the third grade. They will be more likely to graduate from high school and college, and pursue education and career advancement that leads to their own success and Maine’s economic prosperity.

What is the Maine Children's Growth Council

The Maine Children's Growth Council was created to study and act upon the critical economic issue of early childhood. Charged to achieve sustainable social and financial investments in the healthy development of Maine's young children and their families, the Children's Growth Council works with a diverse group of legislators, business leaders, providers, parents, researchers, community leaders and government officials to implement the state plan for a unified, statewide early childhood services system.

The Council was born out of the combined efforts of early childhood advocates, policymakers and government officials who had been meeting for several years as the Task Force on Early Childhood. It was established by statute in April 2008 as a recommendation of the Commission to Develop a Strategic Priorities Plan for Maine's Young Children, a 2007 legislative study committee.

The Early Childhood Comprehensive Systems Grant

In 2003, the federal Maternal and Child Health Bureau (MCHB) awarded Maine an Early Childhood Comprehensive Systems (ECCS) grant. That grant gave Maine's Title V program the impetus to use its leadership and convening powers to foster the development of cross-agency early childhood systems planning, and ultimately, implementation of change strategies through the Maine Early Childhood Initiative (ECI). MCHB's key reasons for funding ECCS was a sense that while health is a critical part of school readiness, it had not received the same level of attention as had cognitive development, primarily because the discussions around the early childhood table were largely taking place within the early care and education sector. ECCS has served as a conduit for connecting different opportunities that are unlikely to have been as effectively coordinated in the absence of a comprehensive systems-building effort. Thus, Maine's Early Childhood Initiative led the Task Force in its work as a cross-systems, cross-department effort involving statewide business and community leaders. Using national ECCS resources, including technical assistance and alerts to new research and promising practices, Maine focused its plan to change vital early childhood systems.

Snapshot of Accomplishments

The Council's accomplishments have naturally dovetailed from the achievements of the earlier Task Force and the systems-building efforts of the ECCS grant and Maine's ECI to create a more effective system of resources and services for children ages birth to 5 and their families.

The first state strategic plan to enact a comprehensive early childhood system, *Invest Early in Maine—A Working Plan for Humane Early Childhood Systems*, was informed by stakeholders and published in 2006, followed by updates in 2007 and 2008. The Task Force and ECI leveraged private dollars to support the 2007 first-ever Governor's Economic Summit on Early Childhood and the subsequent Governor's Business Roundtable on Early Childhood Investment. Later under the auspices of the Council, business leader summits were held in Portland, Bath, Augusta, Bangor and York and Hancock County. Funding was provided by the National Governors Association, Partnership for America's Success/PEW Foundation, the Nellie Mae Education Foundation and the Bingham Program. The Summits were held in partnership with the Maine Chamber of Commerce and regional United Ways.

Thanks to the work of the Task Force and the Council in 2011 Maine was recognized as one of eight states exemplifying best practices in building early childhood systems by the federal Maternal and Child Health Bureau ECCS. This recognition can be credited to Maine's work on: family support, early care and education, child health and mental health, financing, leveraging resources, and engaging philanthropy. In particular, the Council has served as a conduit, connecting different opportunities that would not have been as effectively coordinated in the absence of a comprehensive systems-building effort.

Committees of the Council continue to address the underlying social and cultural norms that influence the ways in which we value young children and their families. Their goal is to provide all early childhood providers, especially parents, with the information and tools to enhance their skills in caring for children. This *Invest Early for 2020* plan guides their efforts and helps partners think about ways to build connections across sectors and services. The plan serves as a tool for communicating to policymakers and other stakeholders the importance of building comprehensive. It also helps build public and political will about investing in early childhood.

How do we Define the Early Childhood Comprehensive System?

The Early Childhood Comprehensive System is a coordinated set of programs and supports designed to meet the needs of young children and their families. The purpose of the System is to support families in ensuring their children have the skills they need to function well in school and in life. The System is organized into three categories—(1) family support; (2) parent and child health, including mental health; and (3) early learning and development.

Everyone has a role and responsibility for the success of the Early Childhood Comprehensive System. Families can't do it alone and government can't do it alone. Programs and family supports should exist at the individual, community and state levels. The System should be supported by public and private dollars and resources, and through the cooperation of service providers, practitioners and families.

There is much to do in Maine to bring this kind of comprehensive system to young children and families. Not every task in building the System requires new or additional funding. Rather, we need to commit to forging new partnerships, coordinating new and existing resources, streamlining existing funding, thinking creatively and productively, and working collaboratively within services and programs. The System must be measured for outcomes



The Solution

Like the pieces of a puzzle, consistent supportive relationships and early education come together to make children healthy and productive. Their successes contribute to Maine's economic and community development, and a better society. Supporting quality early childhood experiences will save Maine money.



and effectiveness. The following characteristics describe an effective and efficient Early Childhood Comprehensive System for Maine:

- **Accessible and Affordable for Maine People.** All Maine children and their families must have access to a high-quality comprehensive early childhood system regardless of where they live or how much they earn.
- **Family-friendly.** Our system must provide safe, nurturing environments for healthy growth and development that support and respond to families' needs.
 - **Inclusive of Children and Families with High Levels of Need.** Children and families living with physical challenges, emotional and mental health problems, extreme poverty, and other special needs must be included in our planning and investing.
 - **Sensitive to Families of Different Cultures and Languages.** We must respect our differences and build on our strengths as Maine people, providing equal access to support for families from all cultures and backgrounds.
- **Preventive and Proactive.** We must envision a proactive, not a reactive, system—one that uses proven preventive strategies to encourage healthy development. Early childhood professionals, practitioners, caregivers and participants must all be held accountable for a successful system.
 - **Uniformly High in Quality.** Each program must commit to Maine's highest standard of quality. Children in Washington County must have access to the same high-quality system as children in Cumberland County.
 - **Coordinated and Collaborative among Funders and Partners at all levels.** No one group or profession can do this alone; we must work cooperatively, sharing resources and expertise.
- **Fully Funded and Sustainable for the Long Term.** Our current system has been funded poorly and in a piece-meal fashion, often targeting a portion of the problem rather than finding holistic or preventive solutions. Funds must address each category of the system—family support, parent and child health and mental health, and early learning and development—in order to effectively build safe, nurturing environments for the healthy growth and development of our youngest children.
 - **Accountable, Based on Research, Evidence and Outcomes**—Public and private funds must be invested in programs that are proven to work. We must be able to measure and show the outcomes of our investments. We must also honor Maine's legacy of innovation and creativity.
 - **A Stable, Valued and Prepared Workforce.** Teachers, providers, practitioners and caregivers must have access to specialized early childhood education and training and must be paid commensurate with the importance of their responsibilities and their expertise. These qualities lead to a stable and effective workforce.

Vision for Maine's Youngest Children by 2020

By 2020, Maine will provide all young children and their families with a high-quality early childhood comprehensive system that lays a strong foundation for children's cognitive, emotional, social and physical development; supports healthy families; and prepares young children for success in school and as Maine's future workforce.

Early Childhood Goals for Maine by 2020

The following eight goals drive the Maine Children's Growth Council work plan. The Council has established committees to develop and implement steps toward meeting these goals. They are: Families; Parent and Child Health; Early Learning and Development; Public Awareness and Communication; Public Policy and Legislative; Accountability and Data; and Sustainability. Focused action to achieve these eight goals is the key to our achieving a successful, supportive comprehensive system for Maine's youngest children.



Maine's Solutions

Solutions are needed as early as possible to help Maine's children become healthy and successful. Early childhood matters because those experiences carry lifelong effects. We all benefit from investments in early childhood which save Maine millions in treatment, crime, and lost economic opportunity.

Effective solutions include:

- High quality early care and education
- Early literacy, home visiting
- Parenting education
- Abuse and violence prevention
- Early screening
- Affordable and accessible quality health care, mental health care and oral health care

The Council is committed to acting on these solutions.

Goal 1: Ensure access to family support and prevention programs

We will work to sustain family support and prevention programs that promote the healthy development of children and strengthen the well-being of their families, such as home visiting services. Family support services include parenting education that strengthens parents' and other caregivers' knowledge about brain architecture and how their actions affect their child's development. Home visiting and parenting education enable parents and other caregivers to develop the skills that foster their child's healthy development and school readiness.

We will also support the efforts of community partners that enable families to secure their basic needs, access benefits, and connect with other families and community services.

Goal 2: Ensure access to family-centered parent and child health programs

These programs will focus on prevention and early intervention; support positive physical, socio-emotional and mental health development; and foster informed and healthy consumers. Our goal for the System is comprehensive parent and child health programs that serve families from prenatal to the child's entry into kindergarten. Health and mental health programs must include: perinatal health, early screening and identification, child health and nutrition, developmental, infant mental health, socio-emotional and mental health, oral and dental health, immunization, adverse childhood experiences, health insurance, child abuse prevention, prevention of domestic violence and substance abuse and more.

Providers of these programs include the child's medical home and obstetricians; pediatricians; medical midwives; public health nursing; Well Child Clinics; Women Infants and Children (WIC); Early Periodic, Screening, Diagnosis, and Treatment (EPSDT); DOE Child Development Services; and more.

Goal 3: Ensure access to early care and education programs that are high-quality, inclusive and affordable

All types of early learning programs and settings will strive for high quality and will meet the needs of children and families with special needs. Maine's early learning programs and settings include public and private child care centers and family child care homes, Head Start and Early Head Start, specialized preschools and public pre-kindergarten programs for 4-year-olds.

Goal 4: Build a stable early childhood workforce that is prepared and valued

We will support the continued development of Maine's early learning guidelines (ELG) and quality rating and information system (QRIS) to support the education, technical assistance and training needs of early care and education personnel. We will work to improve access to affordable education and training. Building a prepared workforce will take collaboration and coordination of resources among all early childhood professionals, practitioners and caregivers. A prepared and well-compensated workforce at every level will provide Maine's children with the stability and consistency they need to thrive.

Goal 5: Inform the public and build public will for Maine's future

We will continue to provide educational opportunities for the public to understand the science of early brain architecture, the importance of nurturing environments and the benefits of early childhood investments. We will deliver our messages to key populations, such as legislators and government policymakers, business leaders, philanthropy, parents and young people. Our goal is for Maine's population to possess the will to support investments that promote children's success in school and in life.

Goal 6: Ensure that funds are spent responsibly and outcomes are measured

We will support fiscal responsibility among early childhood professionals, participants, and policymakers and work to measure the outcomes of early childhood investments. We will particularly target programs that are committed to strive for the highest level of quality. We support programs that are based on proven research but also innovative efforts informed by evidence and evaluations. We will evaluate our own programs based upon measurable outcomes, so that programs can prove their value and be more cost-efficient and effective in the long term.



Goal 7: Build cohesive and coherent early childhood public policy

We will work to stimulate a healthy and informed public discourse about state and federal budgets and legislative and regulatory policies that affect young children and their families. We will promote consistent, rational and organized policies that result in an effective comprehensive early childhood system. Our overall goals for public policy are to promote positive early childhoods and to lay the foundation for future learning, behavior and health.

Guaranteeing Maine's prosperity through the success of every child should be at the forefront of Maine's public policy in Augusta and in local communities.

Goal 8: Finance and sustain the Early Childhood Comprehensive System

We will work with the newly established Maine Early Learning Investment Group consisting of business leaders throughout Maine to develop private resources for Maine's Early Childhood Comprehensive System. We will work with Maine philanthropy, individuals and government toward building and sustaining a fully financed system using public and private resources at the federal, state and local levels over the long term. Sustainability also includes levels of cooperation, coordination and collaboration within the System and with the public and consumers.

The Priorities of the Maine Children's Growth Council

To continue development of a quality Early Childhood Comprehensive System, the Maine Children's Growth Council will focus on the following priorities throughout the current and upcoming biennium. Council committees will develop specific strategies and workplans to accomplish each priority. The priorities are: early childhood screening, prevention, a quality workforce, shared responsibility, and communication and awareness about early childhood.

1. Screening Young Children

Adequate, appropriate and timely screening and/or assessments of young children leads to equally adequate, appropriate and timely services.

Kindergarten Screening—Support the Maine Superintendents Association, specific superintendents throughout Maine, related children's groups, the Department of Education (DOE), Educate Maine and the newly established interdepartmental effort: State Agencies Interdepartmental Early Learning (SAIEL) to develop and implement a uniform, universal kindergarten screening process. Currently no standardized screening tool has been used statewide.

Infant and Toddler Assessment—Work with the child's medical home, and other appropriate physicians, providers and practitioners within the early childhood system to improve timely assessments in all aspects of child health and development. Assessments will be conducted with validated, agreed upon instruments and methods (e.g., parent completion, interview, observation and directly provided) and administered by qualified personnel. The results of the assessments will lead to appropriate planning, coordination and delivery of needed services and supports. Assessments include, but are not limited to: physical health, lead, mental health, nutrition, oral health, education, social-emotional development, comprehensive developmental, environmental, Adverse Childhood Experiences (toxic stress), sleep, safety, and parental depression.

The screening information will be available to other child and family health and mental health providers involved with the child and/or family to ensure comprehensive, quality care, to avoid duplication of services, and to result in timely and appropriate referrals. (Note: Children and parents are protected by federal regulations for privacy found in the Family Education and Privacy Act (FERPA) and Health, Insurance Portability and Accountability Act (HIPAA).)

2. Prevention

Preventing health and developmental problems and toxic stress is far less costly and intrusive than waiting until problems are severe or irreversible.

Adverse Childhood Experiences (ACEs or Toxic Stress)—Implement more aggressive efforts to prevent Adverse Childhood Experiences, also called toxic stress, through (a) educational efforts targeted at families, business leaders, health/medical care community, behavioral health providers, early care and learning professionals, community and civic leaders, educators and elected officials; (b) distribution of a toolkit for practitioners that assists in promoting the prevention of ACEs at the local community level; (c) encouraging all families to become familiar with ACEs and their own ACEs score; and (d) identifying effective prevention and support strategies based on research and evidence and making them available to Maine’s young children and their families.

Home Visiting—Provide leadership to enhance the home visiting system in Maine, working especially with Maine Families, the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) project. Home visiting services are provided to vulnerable Maine families in their important work of raising healthy and successful young children. Maine Families Home Visiting coordinates its services with public health nursing, community health nursing, Head Start and Early Head Start, and other home-based and direct service family support programs. Maine was one of nine states selected nationwide to receive competitive expansion grant funds for its evidence-based, statewide home visiting program, Maine Families, to expand home visiting capacity, to build community collaboration,

and strengthen program evaluation. Another grant provides funds to continue supporting focused programs in Penobscot, Piscataquis and Washington counties, and to broaden services in Aroostook, Kennebec and Somerset counties.

Parent Education—Improve parents’ access to evidence-based education opportunities in order to improve safety and well-being of Maine’s children. Parenting education, sometimes called parent training, is an opportunity for parents and caregivers to spend time reflecting on the experience of raising a child. With the help of a parent educator they can develop or refine skills that focus on positive interactions with their child, increase nurturing and attachment, promote pro-social behavior, and change attitudes and behavior around discipline and problem solving.

Protective Factors—Expand awareness and use of Strengthening Families protective factors among professionals who work with families in the early childhood system. Early childhood professionals play an important role in protecting and nurturing of young children and promoting their social and emotional development. In addition, they play a significant role with parents and other family members. The Strengthening Families approach shifts the focus of child abuse and neglect from family risks and deficits to family strengths and resilience. All early childhood professionals need to learn this effective approach.

3. Quality Workforce

A stable, knowledgeable workforce compensated based on experience and education assures Maine's youngest children of high quality services that prevent problems, promote healthy development and support families.

The Quality Rating and Information

System, Quality for ME—Lend support to ongoing improvements in the quality rating system, parent awareness of the step system for choosing child care, and provider access to training, technical assistance and support to increase their level of quality. Quality for ME is a voluntary four-step program designed to increase awareness of the basic standards of early care and education, to recognize and support providers who are providing care above and beyond those standards, and to educate the community of the benefits of higher quality care. All licensed child care programs (centers and family child care homes) that have been in operation for 12 months are eligible to participate in Quality for ME. Child care providers receiving state subsidies are required to join but are not required to move up the steps of quality. Head Start and Early Head Start programs are required to enroll and maintain at least the second step.

Step 1 indicates that the program is in good standing with child care licensing and all staff are enrolled in the state registry.

Step 2 has some additional policies, procedures, and staff qualifications.

Step 3 has more requirements, including parent conferences, staff evaluations and written daily communications for infants and toddlers.

Step 4 is the highest quality rating. These programs have been accredited by a

national organization, staff have the highest level of experience and education, and programs actively use the Maine Early Learning Guidelines. Parents using Step 4 programs are eligible for a double child care tax credit. Quality improvements and professional development opportunities for child care are provided through Maine Roads to Quality in partnership with Maine's Resource Development Centers as well as Maine's Higher Education System. The Maine Roads Registry and Career Lattice tracks members' training and educational opportunities in one convenient location. Other early childhood workers have specific requirements for education and credentials managed by these and other entities, such as the Maine Families Home Visiting program, Head Start and the Pre-K Four Year Old program. Access to all training and technical assistance programs have been hampered by the cost to the programs and poor funding of educational opportunities.

Maine Early Learning Guidelines—Lend support to and track the work of DOE and DHHS in the revision of the Maine Early Learning Guidelines so that stakeholders from all sectors of early childhood understand, support and implement the Guidelines in their work with children and families. The Guidelines have not been revised since they were developed in 2005, which was prior to Maine's adoption of the Common Core Standards that represent critical learning targets in mathematics and English Language Arts. The Guidelines help state and local early care and education practitioners improve early childhood practice and programs for young children ages 6 weeks through entrance to kindergarten. The Guidelines promote greater collaboration and consistency across systems by aligning practices in all early childhood settings, including public pre-K four year old programs.

Cross Systems Professional Development–

Host professional development opportunities to increase communication across early childhood sectors about best practices in early care and education, influencing cross-sector professional development. During 2010-2011, the Council hosted eight Regional Early Learning Communities in order to strengthen alignment within the sectors most frequently engaged with parents and families in the delivery of early childhood education and family support. During 2011-2012, the ECE Accountability Team will host professional development opportunities in response to the needs identified by the learning communities.

4. Shared Responsibility

The Early Childhood Comprehensive System holds responsibility for adequate data collection and analysis; program monitoring and evaluation; and collaboration of efforts. These are some of the most effective tools for building a quality system.

Data–Work within state agencies and with regional and community providers to acquire and analyze data that can help guide the effectiveness of the Early Childhood Comprehensive System. Data collection and resource mapping of the different component parts of the Early Childhood Comprehensive System is critical. The information must be analyzed, then shared widely and appropriately to facilitate planning and to link child outcomes to programs and services. There are numerous data gaps, some of which have been described in this report such as Pre K screening and assessment and data about the age of children in child care programs linked to the quality of the program.

Monitoring–Provide feedback to the Departments of Education and Health and Human Services regarding the joint Interdepartmental Agreement for children birth to six who receive services from both departments. The Agreement addresses services to children who are eligible for early intervention and/or related special education. The purpose of the Agreement is to meet IDEA regulations under Part B and C and to provide a written agreement for the establishment and implementation of statewide policies, procedures and practices to ensure that all eligible children are identified, located and evaluated. The Council will review, comment upon and suggest revision to the Agreement as needed.

Public/private partnerships–Work with the partner organizations involved in gaining business leader support and engaging “nontraditional voices” for early childhood investment. The Maine Early Learning Investment Group (MELIG) recently created by Maine-based CEOs, The Maine Development Foundation (MDF), and Educate Maine works to engage business leaders in early childhood policy and practice in Maine. Additionally, the Maine offices of America’s Edge (business leaders), Mission Readiness (military), and Fight Crime Invest in Kids (law enforcement) bring the “unusual” voices to the support of early childhood. The Council will continue to conduct planning and coordinate advocacy and communications with these organizations.

5. Communication and Awareness

The Maine Children's Growth Council strives to disseminate information about the importance of early childhood in order to build support for responsible public policy.

Public Information—Provide facts, information and research about brain architecture and the importance of early childhood investments to the general public through paid advertising, local media outlets, presentations, materials distribution and other venues, utilizing the most current and effective multi-media and electronic methods.

Parents and youth—Provide information about brain architecture and the importance of “serve and return” relationships and toxic stress to parents and primary caregivers of Maine's youngest children through presentations of data and research and through electronic and social media approaches. Collaborate with programs that associate with parents and youth to reach the appropriate audiences. Include information about access to appropriate early childhood services and supports.

Call to the Public

Things you can do to make a difference:

- **Educate yourself.** Learn more about the importance of high-quality Early Childhood Comprehensive System development. Visit early childhood providers in your community.
- **Speak out.** Educate your peers and neighbors about the importance of high-quality early childhood development and brain architecture.
- **Take action.** Advocate for healthy public policy and public and private investments in Maine's youngest children and their families. Share your concerns and ideas with public officials and business leaders. Encourage them to visit high-quality programs in their communities.

Remember, Maine's future depends on the success of every child.

Appendix 1

Maine Children's Growth Council, Membership

Leadership

William P. Braun, Council Co-Chair, Superintendent, RSU 19

Ed Cervone, Council Co-Chair, Senior Program Director, Maine Development Foundation

Members as of December, 2011

Senator Justin Alford

Representative Seth Berry

Sheriff Todd Brackett, Lincoln County Sherriff, representing Fight Crime Invest in Kids, ME

Nancy Brain, Executive Director, Sam L. Cohen Foundation

Jim Clair, CEO, Goold Health Systems

Jan Clarkin, Executive Director, Maine Children's Trust Fund

Alan Cobo-Lewis, Ph.D. Associate Professor of Psychology, University of Maine at Orono

Kathy Colfer, President, Maine Head Start Association

Dana Connors, President, Maine State Chamber of Commerce

Rebecca Dyer, Director, Maine Family Literacy

Jan Goddard, Interested Public Member

Patty Hamilton, RN, Director, City of Bangor Public Health

Karen Heck, Program Officer, The Bingham Program

Jonathan Leach, Executive Director, The Children's Center

Peter Lindsay, Director of Community Impact and Success by Six, Mid Coast United Way

Sue Mackey Andrews, ME Association for Infant Mental Health

Elizabeth Neptune, Passamaquoddy Tribe, Governor's Office

Sandra Peters, Interested Public Member

Rosa Redonnet, Chancellor's Office, University of Maine System

Judy Reidt Parker, Early Childhood Policy Analyst, Maine Children's Alliance

William J. Schneider, Attorney General

Representative Meredith Strang-Burgess

Patti Woolley, Director, Head Start Collaboration Project, DHHS

Ex-Officio Members

Commissioner Stephen Bowen (represented by Jaci Holmes)

Commissioner Mary Mayhew

Sheryl Peavey, Director, Early Childhood Initiative

Staff and Consultants

Donna Overcash, Communications and Child Policy Consultant

Jon Madden, Staff

Appendix 2

Maine Children's Growth Council Accomplishments

The Council's accomplishments have naturally dovetailed from the achievements of the earlier Task Force and the systems-building efforts of the ECCS grant and Maine's ECI to create a more effective system of resources and services for children ages birth to 5 and their families.

The first state strategic plan to enact a comprehensive early childhood system, Invest Early in Maine—A Working Plan for Humane Early Childhood Systems, was informed by stakeholders and published in 2006, followed by updates in 2007 and 2008. The Task Force and ECI leveraged private dollars to support the 2007 first-ever Governor's Economic Summit on Early Childhood and the subsequent Governor's Business Roundtable on Early Childhood Investment. Later under the auspices of the Council, business leader summits were held in Portland, Bath, Augusta, Bangor and York and Hancock County. Funding was provided by the National Governors Association, Partnership for America's Success/PEW Foundation, the Nellie Mae Education Foundation, United Ways and the Bingham Program. The Summits were held in partnership with the Maine Chamber of Commerce and regional United Ways.

Thanks to the Task Force and Council in 2011 Maine was recognized as one of eight states exemplifying best practices in building early childhood systems by the federal Maternal and Child Health Bureau ECCS. This recognition can be credited to Maine's work on: family support, early care and education, child health

and mental health, financing, leveraging resources, and engaging philanthropy. In particular, the Council has served as a conduit, connecting different opportunities that would not have been as effectively coordinated in the absence of a comprehensive systems-building effort.

Committees of the Council continue to address the underlying social and cultural norms that influence the ways in which we value young children and their families. The goal is to provide all early childhood providers, especially parents, with the information and tools to enhance their skills in caring for children. This Invest Early for 2020 plan guides their efforts and helps partners think about ways to build connections across sectors and services. The plan serves as a tool for communicating to policymakers and other stakeholders the importance of building comprehensive systems. It also helps build public and political will about investing in early childhood.

The Council only acts on legislation that is directly initiated to support the strategic plan, such as: LD 1069 for a study group on higher education and early childhood education; LD 969 to modify its membership and make its work more visible to the public; passage of a bill during the 1st Session of the 125th Legislature to include early childhood indicators in the Maine Department of Education (DOE) Conditions of Education Report and add an MCGC member to the Maine Education Policy Research Institute (MEPRI) Steering Committee.

Through the leadership of the ECCS Coordinator, several mental health and family support programs were integrated into an overall effort to build a stronger early childhood system including: (a) the Maine Families Home Visiting program, which is the statewide, state-administered network of providers delivering an evaluated, evidence-based model and cohesive professional development system for home visitors; (Maine is one of nine states to receive a \$30 million expansion grant in 2011); and (b) Project Launch—Maine is one of five states to receive the first federal grant in 2008 to promote collaboration, reform policies and improve community services for young children.

Other accomplishments include:

- Publishing the School Readiness Report (2010 and 2011) on early childhood indicators in partnership with the Maine Children's Alliance.
- Initiating and contributing to the Maine Policy Review's Special Issue on Early Childhood.
- Conducting the statewide Needs Assessment for the Maternal, Infant, and Early Childhood Home Visiting project.
- With technical assistance from the Ounce of Prevention Fund, researching the mechanisms of a successful public-private partnership.

As Maine's designated Early Childhood Advisory Council (ECAC), the Council applied for and received a three-year federal grant in 2010 to support continued systems-building, including the communications plan, focus on Adverse Childhood Experiences, and work with Maine parents.



A special focus on communications and public awareness of early childhood was funded with help from the Nellie Mae Education Foundation. A comprehensive communications plan is being implemented targeting specific populations: business leaders, legislators, parents, public and philanthropy. Communication work includes:

- Training for the early childhood community on strategic frame analysis through the FrameWorks Institute, Inc., a Washington D.C.–based communications agency, and other experts.
- Presenting six full-sized panel banners and collateral materials that convey the core message about brain development and Maine's economic future across the state, including the opening of the Central Maine Educare Center.
- Developing a website, Facebook page, YouTube channel, newsletter; a widespread media campaign, *Maine's Future Depends on the Success of Every Child*, was broadcast at primetime throughout Maine in May 2011.
- Informing legislators through daily fact sheets about early childhood.
- A focus on business leaders through summits and recruitment for Maine Early Learning Investment Group, a CEO-led private financing group working to increase the education and skill levels of Maine people by ensuring that all children start kindergarten ready to succeed.

Endnotes

1. "A Science-Based Framework for Early Childhood Policy: Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children." Center on the Developing Child at Harvard University (2007). <http://www.developingchild.harvard.edu>; Shonkoff, J.P. and Phillips, D.A., eds., (2000), *From Neurons to Neighborhoods: The Science of Early Childhood Development*, National Research Council and Institute of Medicine (National Academy Press, Washington, D.C.).
2. Ibid.
3. Ibid.
4. Graph is by Dr. Charles A. Nelson and is contained in Shonkoff, J.P. and Phillips, D.A., eds., (2000), *From Neurons to Neighborhoods: The Science of Early Childhood Development*, National Research Council and Institute of Medicine (National Academy Press, Washington, D.C.).
5. National Scientific Council on the Developing Child (2004). *Young Children Develop in an Environment of Relationships: Working Paper No. 1*. Retrieved from www.developingchild.harvard.edu.
6. National Scientific Council on the Developing Child (2005). *Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper No. 3*. Retrieved from www.developingchild.harvard.edu.
7. From the "Adverse Childhood Experiences (ACE) Study", an ongoing collaboration between the Centers for Disease Control and Prevention and Kaiser Permanente. Led by Co-principal Investigators Robert F. Anda, MD, MS, and Vincent J. Felitti, MD, the ACE Study is perhaps the largest scientific research study of its kind, analyzing the relationship between multiple categories of childhood trauma and health and behavioral outcomes later in life. Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. <http://www.cdc.gov/nccdphp/ace/findings.htm> and www.acestudy.org.
8. A scoring method for childhood trauma and risk factors developed by Dr. Vincent Felitti, head of the Department of Preventive Medicine at Kaiser Permanente in San Diego, and Dr. Robert Anda, with the Centers for Disease Control and Prevention, was used to determine the extent of exposure to trauma during childhood.
9. Heckman, J. J. (2006). "Skill formation and the economics of investing in disadvantaged children." *Science*, 312, 1900–1902; Heckman, James. <http://www.jec/senate.gov/archive/hearings/06.27.07>; Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M., *Lifetime effects: The HighScope Perry Preschool study through age 40*. (Ypsilanti, MI: HighScope Press, 2005); Campbell, F. A., Ramey, C. T., Pungello, E. P., Sparling, J., & Miller-Johnson, S. (2002). "Early Childhood Education: Young Adult Outcomes from the Abecedarian Project." *Applied Developmental Science*, 6, 42-57.
10. Extrapolated and rounded from 2010 U.S. Census data for Maine; and "Annual Social and Economic Supplement of the Current Population Survey 2010", National Center for Children in Poverty, Maine Early Childhood Profile.

11. Maine Children's Growth Council and Maine Children's Alliance, School Readiness Report, 2011.
12. Extrapolated and rounded from 2010 U.S. Census data for Maine; and "Annual Social and Economic Supplement of the Current Population Survey 2010", National Center for Children in Poverty, Maine Early Childhood Profile.
13. Ibid.
14. Ibid.
15. Ibid.
16. 2011 research provided by Maine Children's Alliance at the request of this report writer.
17. Quality Rating System Monthly Enrollment report emailed on 12.22.2011; based on enrollment data as of this date. Maine Department of Health and Human Services.
18. The State of Maine Early Learning Guidelines, 2005. The State of Maine Early Childhood Learning Guidelines serves as a guide for state and local early care and education practitioners' efforts to improve early childhood professional practice and programs for young children ages three through their entrance into kindergarten. This document considers the core elements contained in the State of Maine Learning Results (K-12).
19. The percentage of students who arrive at kindergarten developmentally unprepared (40%) is an estimate based on data from a number of states that have universal standardized kindergarten assessments (the percentages range from 33% to 50%). It is also based on the opinions of many Maine school teachers and administrators. (Note: There is no standardized kindergarten readiness assessment used in Maine schools.)
20. A self-report screening made available to the Council in 2010 by School Superintendent and Council co-chair William Braun.
21. "Low income" is defined as income at or below 185% of Federal Poverty Level (FPL) for purposes of this chart. The approximate percentage of kindergarteners who are low income (45%) is based on the fact that 44% of Maine K-12 students qualify for the federal free or reduced lunch program (eligibility up to 185% of FPL) as well as the fact that 50% of Maine children under age 6 live at or below 200% of FPL (National Center for Children in Poverty, 2009.) 4th and 8th grade reading statistics are from U.S. Dept. of Education National Assessment of Educational Progress (NAEP) results, 2011.
22. Ibid.
23. 12th grade reading and math statistics are from 2009-2010 Maine High School Assessments.
24. "Low income" is defined as income at or below 185% of Federal Poverty Level (FPL) for purposes of this chart. The approximate percentage of kindergarteners who are low income (45%) is based on the fact that 44% of Maine K-12 students qualify for the federal free or reduced lunch program (eligibility up to 185% of FPL) as well as the fact that 50% of Maine children under age 6 live at or below 200% of FPL (National Center for Children in Poverty, 2009.) 4th and 8th grade reading statistics are from U.S. Dept. of Education National Assessment of Educational Progress (NAEP) results, 2011.

25. High school graduation rate is from Maine Department of Education, 2009. Percentage of high school graduates enrolling in college and percentages of college enrollees graduating within 150% of normal time are from Indicators of Higher Education Attainment in Maine, prepared for Maine Compact on Higher Education by Mitchell Institute, Aug. 2010. Percentages of college students taking remedial courses are rounded from data provided by Maine Community College System and University of Maine System, 2011.
26. "The High Cost of High School Dropouts," November 2011 Issue Brief, Alliance for Excellent Education; Educational and Correctional Populations, Harlow, C.W. (2003), U.S. Department of Justice, Bureau of Justice Statistics; Maine Crime & Justice Data Book (2008), University of Southern Maine Muskie School of Public Service, Justice Policy Program; 2005-2009 American Community Survey 5-Year Estimates, U.S. Census Bureau. <http://factfinder.census.gov/>.
27. Autor, David, Frank Levy and Richard J. Murmane, "The Skill Content of Recent Technical Change: An Empirical Investigation." *Quarterly Journal of Economics*, 118, 4 (November 2003) pp 1279-1334. Data updated to 2002 by David Autor. This graph appears in the Partnership for America's Economic Success paper, "Proposed State and Federal Resource Allocation Principles."
28. Heckman, J. J. (2006). "Skill formation and the economics of investing in disadvantaged children." *Science*, 312, 1900-1902; Heckman, James. <http://www.jec/senate.gov/archive/hearings/06.27.07>; Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M., Lifetime effects: The HighScope Perry Preschool study through age 40. (Ypsilanti, MI: HighScope Press, 2005); Campbell, F. A., Ramey, C. T., Pungello, E. P., Sparling, J., & Miller-Johnson, S. (2002). "Early Childhood Education: Young Adult Outcomes from the Abecedarian Project." *Applied Developmental Science*, 6, 42-57.
29. Ibid.
30. Special education expenditure data is from the Maine Department of Education. All other data are from the US Census Bureau as found in Trostel, Philip (2009), "The Dynamics of Investments in Young Children," *Maine Policy Review*, 18:18-25.
31. Program expenditures (rounded) from budget data of Maine Departments of Education, Health and Human Services and Corrections, 2010; "Substance Abuse in Maine: What does it cost us?", Maine Office of Substance Abuse, Jan. 2011; "Victims Costs and Consequences, A New Look," U.S. Departments of Justice and Health and Human Services, 1996 (national annual costs of domestic violence and sexual assault apportioned to Maine on per capita basis).

