SUMMARY OF ESSENTIAL FINDINGS

A Science-Based Framework for Early Childhood Policy

Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children

A New Publication from the Center on the Developing Child at Harvard University

The path to our nation's future prosperity and security begins with the well-being of all our children, yet state and federal policymakers often struggle with confusing information about which strategies can actually improve outcomes for children at risk for problems. As scientists, we believe that advances in neuroscience, molecular biology, genetics, and child development research, combined with four decades of rigorous program evaluation data, can now provide the common ground on which policymakers, business executives, civic leaders, and practitioners can design effective policies for children in the first five years of life. After vigorous debate among experts representing numerous fields, we present the following summary of what we know from credible, peer-reviewed research.

Early experiences determine whether a child's brain architecture will provide a strong or weak foundation for all future learning, behavior, and health. The interaction of genes and experience shapes the architecture of the developing brain, and the active agent is the "serve and return" nature of children's relationships with the important adults in their lives. Policies that support the ability of parents, providers of early care and education, and other community members to interact positively with children in stable and stimulating environments help create a sturdy foundation for later school achievement, economic productivity, and responsible citizenship.

Young children need positive relationships, rich learning opportunities, and safe environments, not quick fixes or magic bullets. There are many ways to increase the availability of growth-promoting experiences for young children, in their homes and in a variety of child care or preschool settings, as long as programs are well implemented and match the needs of the children and families they serve. Core concepts of neuroscience and child development apply equally to all early childhood policies and practices, and do not vary depending on program category, administrative structure, or funding source.

Four decades of program evaluation research point to the following "effectiveness factors" that can enhance development in the first five years of life:

- Access to basic medical care for pregnant women and children can help prevent threats to healthy development as well as provide early diagnosis and appropriate management when problems emerge.
- Environmental policies that reduce the level of known neurotoxins in the environment will protect embryos, fetuses, and young children from exposure to substances that damage their developing brains.
- Not all services are effective. Center-based programs that have positive impacts on young children's development provide some combination of the following features:
    - highly skilled staff;

  - small class sizes and high adult-to-child ratios;
  - a language-rich environment;
  - age-appropriate curricula and stimulating materials in a safe physical setting;
  - warm, responsive interactions between staff and children; and
  - high and consistent levels of child participation.
- Programs that cost less because they employ less skilled staff are a waste of money if they do not have the expertise needed to produce measurable impacts.
- Scaling up successful, model interventions into effective, multi-site programs is a formidable challenge that can be addressed, at least in part, by establishing quality standards and monitoring service delivery on a routine basis.

Program evaluation research also identifies intervention strategies that have been shown to be effective for children and families who are at risk for poor outcomes:

- For vulnerable families who are expecting a first child, early and intensive support by skilled home visitors can produce significant benefits for both the child and parents.
- For young children from low-income families, high-quality, center-based, early education programs can enhance child cognitive and social development.
- For young children from families experiencing significant adversity, two-generation programs that simultaneously provide direct support for parents and high-quality, center-based care and education for the children can have positive impacts on both.
- For young children experiencing toxic stress from abuse or neglect, severe maternal depression, parental substance abuse, or family violence, interventions that provide specialized services matched to the problems they are asked to address can prevent the disruption of brain architecture and promote better developmental outcomes.
- For families living in poverty, work-based income supplements for working parents have been demonstrated to boost the achievement of some young children.

Effective programs are implemented well, evaluated regularly, and improved continuously. Even the best programs can be improved by the continuous development, testing, implementation, and refinement of new strategies to produce stronger outcomes, particularly for the most vulnerable children and those with challenging behavior or serious mental health problems.

Ensuring that children have positive experiences prior to entering school is likely to lead to better outcomes than remediation programs at a later age, and significant up-front costs can generate a strong return on investment. Cost-benefit studies have demonstrated positive returns on high-quality programs for vulnerable children beginning as early as prenatally and as late as age 4.

The document from which this summary was created was co-authored by the National Forum on Early Childhood Program Evaluation and the National Scientific Council on the Developing Child. For greater detail, please see the full paper, downloadable at www.developingchild.harvard.edu.