

## The Foundations of Lifelong Health Are Built in Early Childhood

### *Summary of Essential Findings*

#### The Big Picture

A vital and productive society with a prosperous and sustainable future is built on a foundation of healthy child development. Health in the earliest years—beginning with the future mother’s well-being before she becomes pregnant—lays the groundwork for a lifetime of vitality. When developing biological systems are strengthened by positive early experiences, children are more likely to thrive and grow up to be healthy adults. Sound health also provides a foundation for the construction of sturdy brain architecture and the achievement of a broad range of skills and learning capacities.

#### What Science Tells Us

Advances in neuroscience, molecular biology, and genomics have converged on three compelling conclusions:

- Early experiences are built into our bodies.
- Significant adversity can produce physiological disruptions or biological “memories” that undermine the development of the body’s stress response systems and affect the developing brain, cardiovascular system, immune system, and metabolic regulatory controls.
- These physiological disruptions can persist far into adulthood and lead to lifelong impairments in both physical and mental health.

#### Messages for Decision-Makers

The biological sciences have two clear and powerful messages for leaders who are searching for more effective ways to improve the health of the nation. First, current health promotion and disease prevention policies focused on adults would be more effective if evidence-based investments were also made to strengthen the foundations of health in the prenatal and early childhood periods. Second, significant reductions in chronic disease could be achieved across the life course by decreasing the number and severity of adverse experiences that threaten the well-being of young children and by strengthening the protective relationships that help mitigate the harmful effects of toxic stress.

#### A New Framework for Early Childhood Policy and Practice

The following four interrelated dimensions offer a promising framework for innovative approaches to improving physical and mental well-being.

**The biology of health** explains how experiences and environmental influences “get under the skin” and interact with genetic predispositions, which then result in various combinations of physiological adaptation and disruption that affect lifelong outcomes in learning, behavior, and both physical and mental well-being. These findings call for us to augment adult-focused approaches to health promotion and disease prevention by addressing the early childhood origins of lifelong illness and disability.

**The foundations of health** refers to three domains that establish a context within which the early roots of physical and mental well-being are nourished. These include:

- *a stable and responsive environment of relationships*, which provides young children with consistent, nurturing, and protective interactions with adults that enhance their learning and help them develop adaptive capacities that promote well-regulated stress response systems;
- *safe and supportive physical, chemical, and built environments*, which provide physical and emotional spaces that are free from toxins and fear, allow active exploration without significant risk of harm, and offer supports for families raising young children; and
- *sound and appropriate nutrition*, which includes health-promoting food intake and eating habits, beginning with the future mother's pre-conception nutritional status.

**Caregiver and community capacities to promote health and prevent disease and disability** refers to the ability of family members, early childhood program staff, and the social capital provided through neighborhoods, voluntary associations, and the parents' workplaces to play a major supportive role in strengthening the foundations of child health. These capacities can be grouped into three categories: (1) time and commitment; (2) financial, psychological, and institutional resources; and (3) skills and knowledge.

**Public and private sector policies and programs** can strengthen the foundations of health through their ability to enhance the capacities of caregivers and communities in the multiple settings in which children live, learn, and play. Relevant policies include both legislative and administrative actions that affect systems responsible for public health, child care and early education, child welfare, early intervention, family economic stability (including employment support for parents and public assistance), community development, housing, environmental protection, and primary health care, among others. It is also important to underscore the role that the private sector can play in strengthening the capacities of families to raise healthy and competent children, particularly through supportive workplace policies.

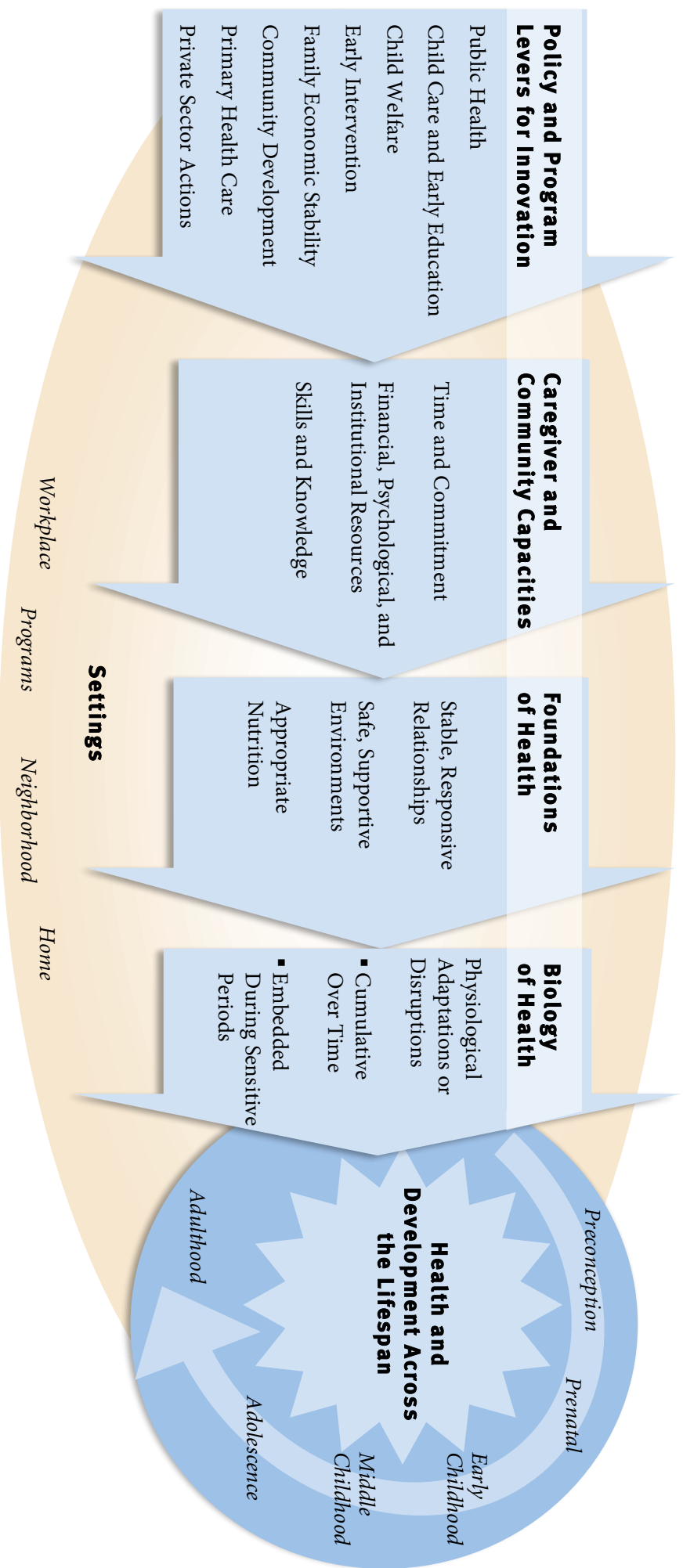
### **Transforming the Promotion of Health Across Policy Sectors**

Extensive evidence that effective health promotion and disease prevention depend on more than access to high-quality medical care underscores the need for new strategies to improve our nation's health. Experience shows that enhanced coordination of effort across service systems is desirable but that alone is unlikely to produce sufficiently greater impact if the systems are guided by different values and bodies of knowledge. What is needed instead is creative new thinking about how to apply a *unified* scientific understanding of the early childhood origins of health, learning, and behavior across multiple sectors. Every system that touches the lives of children—as well as mothers before and during pregnancy—offers an opportunity to leverage this rapidly growing knowledge base to strengthen the foundations and capacities that make lifelong healthy development possible. Investments in the early reduction of significant adversity are particularly likely to generate strong returns.

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*The full paper, The Foundations of Lifelong Health Are Built in Early Childhood, was co-authored by the National Scientific Council on the Developing Child and the National Forum on Early Childhood Policy and Programs, which are both initiatives of the Center on the Developing Child at Harvard University. Copies of this document, as well as more information about the authors and the Center, are available from [www.developingchild.harvard.edu](http://www.developingchild.harvard.edu).*

## A Framework for Reconceptualizing Early Childhood Policies and Programs to Strengthen Lifelong Health



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