

Early childhood health interventions could save billions in health costs later in life

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Promoting the health of young children, before five years of age, could save society up to \$65 billion in future health care costs, according to an examination of childhood health conducted by researchers at the Johns Hopkins Bloomberg School of Public Health. The results are published in the May 15, 2009, issue of *Academic Pediatrics*.

"Our review found convincing evidence that the four health problems we studied—early life tobacco exposure, unintentional injury, obesity and mental health—constitute significant burdens on the health of preschool-age [children](#) and are antecedents of health problems across the life span," said Bernard Guyer, MD, lead author of the study and the Zanvyl Kreiger Professor of Children's Health with the Bloomberg School's Department of Population, Family and Reproductive Health. "These health problems affect approximately one-third to one-half of children born in the U.S., and we estimated that total lifetime societal cost could be about \$50,000 per child—which translates to \$65–100 billion for the entire birth cohort of children. The currently available research justifies targeted investments in early childhood health promotion as a means to averting future health costs and improving overall health during their life span."

Researchers conducted a systematic review of early childhood interventions using multiple health databases: PubMed, PsycINFO, National Health Service Economic Evaluation Database, the National Bureau of Economic Research working paper database and EconLit. Guyer and his colleagues examined the magnitude of the future effects of tobacco exposure, unintentional injury, obesity and mental health. They looked at prevalence of these issues during the target age period, their cost implications across the life span, the availability of preventive interventions in this period of life and evidence indicating that prevention of these problems early in life would pay off or save costs in the future. Researchers found that the available evidence for the

effectiveness of intervention in this age group was strongest in the case of preventing tobacco exposure and controlling unintentional injuries.

Smoking impacts young children through prenatal exposure and environmental tobacco smoke. In the U.S., an estimated 25 percent of children are exposed to environmental tobacco smoke by household members, and 500,000 babies are born annually to mothers who smoke during pregnancy, according to tobacco prevention studies. Environmental tobacco smoke programs specifically aimed at reducing exposure to children within the first five years of life would produce an estimated cost savings of \$500 million.

Injuries are the leading cause of death, disabilities and health care utilization for U.S. children and teenagers between the ages of 1 and 19. Recent studies have concluded that both fatal and nonfatal injuries among children from infancy to four years resulted in \$4.7 billion for lifelong medical costs and \$14 billion for present and future productivity losses. While obesity among preschoolers has recently been recognized as a major health problem, age-appropriate prevention and intervention strategies are still lacking. Researchers believe there is a need for carefully targeted research to examine the relationship between early childhood preventive interventions and health outcomes across the life course.

"The four children's health topics selected demonstrate that the policy solutions needed to address them go well beyond the medical model of a doctor treating a sick child," said Sai Ma, PhD, corresponding author of the study and an assistant scientist with the Bloomberg School's Department of Population, Family and Reproductive Health. "Meeting the underlying health needs of American children will require decision makers and practitioners to understand complex multiple determinants of health and disease, as well as public health approaches that involve family,

community and national interventions."

Source: Johns Hopkins University Bloomberg
School of Public Health ([news](#) : [web](#))

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