



RESEARCH BRIEF

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Investing in Early Care and Education is a Powerful Public Health Initiative for America's Children

Investing in quality early learning programs is truly a powerful health initiative, not only because of its enduring effects on individual health, but because of its extensive impact on public health and public safety. Early care and education provides the opportunity to address the roots and earliest influences on health behaviors. It has the potential to generate direct, immediate, and lasting benefits.

The interdependence of health and early learning is clear; healthy children learn and children in quality early learning programs enjoy tremendous health benefits. *Early care and education is a crucial investment in our nation's financial and public health.*

Brain development in the earliest years offers a critical window of opportunity to profoundly influence life-long physical, mental and social health. The impact of quality early learning settings on individual and public health is compelling evidence to move towards an early childhood comprehensive system that ensures access to quality early care and education experiences. The following lays the framework for understanding the value of investments in early care and education as a tremendously effective means to promote health.



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Making the Case for Early Care and Education: What We Know



Early learning settings may be some of the most effective and most important venues through which our nation's health is transformed

A growing body of rigorous, longitudinal research has produced some key findings linking early education, including prekindergarten, to long-term, positive changes in health behavior:

Evidence Based Health Behavior Impact of Quality Early Learning Programs

High/Scope Perry Preschool Study

- Less likely to become smokers
- Less likely to engage in risky behaviors
- Less likely to use/abuse illicit drugs
- Less likely to engage in violent behavior
- More likely to be employed and earn higher wages
- More likely to wear seat belts

Chicago Child-Parent Centers Study

- Lower rates of child maltreatment
- Lower rates of depression
- More likely to have health insurance
- Lower rates of teen pregnancy
- Lower rates of felony arrests and incarceration

The Abecedarian Study

- Lower rates of cigarette smoking
- Lower rates of teen pregnancy
- Lower rates of marijuana use

Brookline Early Education Project

- More likely to have health insurance
- More likely to have a regular source of health care
- More likely to visit a doctor or dentist annually
- More likely to report a health rating of good or excellent
- Lower rates of depression

In addition to these evidence-based, long-term outcomes of quality early learning experiences, high-quality early care and education programs offer opportunities to provide young children and families with preventive health screenings, timely and appropriate referrals to medical homes and services that promote health, parent coaching and parent-child centered health promotion interventions that address specific health behaviors. There is also limitless potential to implement focused education programs that target specific health outcomes such as obesity at a very young age. *Early learning settings may be some of the most effective and most important venues through which our nation's health is transformed.*¹

The Health Impact of Quality Early Learning Programs

There are many clear, evidence-based health outcomes that are positively impacted by high-quality early learning programs. Our literature review and supported conclusions lay the framework for an initial understanding of the magnitude of the health benefits that are realized by investments in quality early learning programs.

By exploring the health impact of documented behavior changes that result from quality Pre-K programs, we begin to reveal the far-reaching, preventive and cost efficient public health outcomes of investments in quality early learning programs.

Smoking

Children who participate in high-quality early care and education programs are less likely to become smokers^{2,3}. By reducing the number of individuals who smoke, we can expect a precipitous drop in diseases, deaths, and other health consequences directly linked to smoking.

According to the 2004 Surgeon General's Report—*The Health Consequences of Smoking*, the following diseases can be directly linked to smoking⁴:

Bladder cancer	Abdominal aortic aneurysm
Cervical cancer	Atherosclerosis
Esophageal cancer	Cerebrovascular disease (stroke)
Kidney cancer	Coronary heart disease
Laryngeal cancer	Chronic obstructive pulmonary disease
Leukemia	Low bone density
Pneumonia	Fetal death and stillbirth
Lung cancer	Reduced fertility (in women)
Oral cancer	Low birth weight
Pancreatic cancer	Cataracts
Stomach cancer	

The opportunity to prevent smoking by teaching children long-lasting healthy behaviors in early childhood is a proactive approach towards decreasing some of our nation's most prevalent public health costs and concerns such as cardiovascular disease. This early intervention embodies exactly the kinds of public health principles that will have dramatic impacts on the health of the next generation.

Nutrition/Physical Fitness

Children who participate in high-quality early care and education programs are more likely to eat balanced, nutritional diets and lead physically active lives as adults^{5,6,7}. By positively influencing diet and levels of physical activity, we can expect an overall reduction in diseases, deaths, and other health consequences directly linked to poor nutrition and low levels of physical activity, including obesity and diabetes.

According to the U.S. Centers for Disease Control and Prevention, the following conditions can be attributed to poor diet and physical inactivity⁸:

- Obesity
- Hypertension (high blood pressure)
- Osteoarthritis
- Dyslipidemia (high cholesterol)
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast, and colon)
- Depression and anxiety disorders

The magnitude of the obesity problem is growing. It calls for a holistic, preventive approach. The opportunity to alter behaviors at a young age through early learning venues is a far wiser approach than investing in costly treatment.

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Alcohol/Drug Use

Children who participate in high-quality early care and education programs are less likely to abuse alcohol or use illicit drugs. By reducing the number of individuals who abuse alcohol and/or illicit drugs, we can expect a decrease in the number of diseases, deaths, and public safety incidences directly linked to alcohol and other drugs⁹.

The use of illicit drugs and alcohol abuse both have a profoundly negative impact on physical and mental health status^{10, 11}. The following health consequences are associated with the abuse of alcohol and illicit drug use:

HIV, hepatitis and other infectious diseases
Cardiovascular disease
Respiratory illness (including pneumonia)
Kidney damage
Liver damage
Neurological damage
Mental illness/depression
Cancer
Violence and homicide
Accidental injury
Accidental overdose/acute alcohol poisoning
Suicide

The far reaching public health impact that reductions in alcohol and drug realized by quality early learning programs is profound. The idea that early learning lays the ground for future health habits and life choices is illustrated by the capacity of quality early learning settings to reduce future substance use.

Mental Health

Children who participate in high-quality early care and education programs are less likely to experience depression and symptoms of depression. By reducing the number of individuals who experience depression and symptoms of depression, we can expect an overall reduction in the number of injuries and fatalities linked to suicide and incidences of depression comorbidity^{12, 13, 14, 15, 16}.

Depression and depressive symptoms can give rise to a broad range of physical and social consequences. Further, the spectrum of possible health consequences can span the seemingly benign to disabling or fatal. The following health consequences are associated with depression:

Suicide	High blood pressure
Substance abuse	Cancer
Eating disorders	Type 2 diabetes
Sleep disorders	Disability
Heart disease	

Childhood and adult mental health problems are a major public health concern. An estimated 10 to 20 percent of young children experience significant mental health problems and only one third of these children receive help¹⁷. Many children go undiagnosed and untreated which starts them on a trajectory of school failure with its profound consequences. Early intervention services and mental health consultations and referrals play an important role in identifying and evaluating social-emotional challenges in young children. These efforts are critical to children entering school healthy and ready to learn. Quality early learning programs offer a promising and proven venue to identify mental health concerns and address them early.

Participation in quality pre-kindergarten has a documented impact on **nine out of ten** leading health indicators, as defined by *Healthy People 2010*:

- Physical activity
- Substance abuse
- Injury and violence
- Overweight and obesity
- Responsible sexual behavior
- Immunization
- Tobacco use
- Mental health
- Access to health care

* No evidence linking participation in early care and education to changes in environmental quality have been documented.

Seat Belt Use

Children who participate in high-quality early care and education programs are more likely to use safety belts¹⁸. By increasing the number of drivers and passengers who consistently use safety belts, we can expect an overall reduction in the number of injuries and fatalities linked to motor vehicle accidents¹¹.

The health consequences of motor vehicle crashes can be both physical and psychological in nature with potentially lifelong implications for victims.

They include:

Spinal cord injury (quadriplegia and paraplegia)	Chronic pain
Traumatic brain injury	Post traumatic stress disorder
Facial trauma	Depression
Blunt chest trauma	Death

The complex processes that contribute to health and safety promoting choices like seatbelt use, and the influence that quality early learning programs has on such behaviors and resulting health outcomes is illustrative of the dynamic early brain development and the compelling opportunity it presents to have a profound, positive impact on morbidity and mortality.

Abuse/Violence

Children who participate in high-quality early care and education programs experience immediate and long-term protection from acts of physical abuse. By using proven methods of parent education and interventions, quality early learning programs can substantially reduce the incidence of child abuse²⁰. Quality early learning settings also offer an added and early venue where warning signs for abuse and signs of abuse can be swiftly recognized, reported and addressed. By reducing the number of individuals who are likely to engage in acts of abuse or violent behavior, we can expect a decrease in the overall number of injuries and fatalities attributable to abuse.

According to the U.S. Department of Health and Human Services' Administration for Children and Families, the following health consequences are associated with abuse, neglect, and maltreatment²¹:

Lifelong poor physical health	Delinquency and criminal activity
Depression and anxiety	Teen pregnancy
Trauma	Illicit drug use
Disability	Low academic achievement
Low self-esteem	Involvement in violent crime
Eating disorders	Abusive behavior
Suicide attempts	

The ability of quality early learning programs to prevent some of societies most devastating and disturbing problems such as child abuse is illustrative of the opportunities for screening, education, intervention and long term behavior changes that quality programs offer.

High-risk Sexual Behavior

Children who participate in high-quality early care and education programs are less likely to engage in high-risk sexual behaviors. Teen pregnancy can have negative health implications for both the mother and her child²². By helping teens avoid or reduce high-risk sexual activity (by either delaying sex or by using contraception), we can prevent teen pregnancy and sexually transmitted diseases (STDs) including HIV/AIDS. Early care and education can reduce the number of unplanned pregnancies, teen pregnancies, and non-marital births.

Evidence suggests that babies born to teen mothers are at increased risk for specific health problems compared to babies born to older mothers²³. The children of teen mothers are more likely to be born prematurely and at low birthweight compared to children of older mothers, which raises the probability of:

Infant death	Mental illness
Blindness	Cerebral palsy
Deafness	Dyslexia
Chronic respiratory problems	Hyperactivity
Mental retardation	

Reducing teen pregnancy can improve the health of teens, their future children, and reduce the costs of public health services²⁴. Early care and education can reduce the number of unplanned pregnancies, teen pregnancies, and non-marital births.

Employment/Health Insurance

Children who participate in high-quality early care and education programs are more likely to have consistent employment and health insurance^{25, 26}. Early care and education can increase the number of individuals with access to health insurance and essential preventive health care, thereby limiting the number of individuals affected by breast, cervical, and colorectal cancers, heart disease, and type 2 diabetes.

Immediate Health Benefits

In addition to fostering positive future health behaviors and facilitating lasting positive health outcomes, early care and education programs are an ideal setting to realize immediate health benefits.

By offering a variety of family, teacher and child education programs, health screenings, referrals, collaborations with medical home settings and services to children enrolled in early care and education programs, we have the opportunity to make an even greater impact on the overall health status of our nation.

By uniting the early learning and public health communities to develop focused initiatives that target key health behaviors, we can expect a future of even greater health outcomes attributed to quality early care and education. There are already examples of successful initiatives and, with greater investments and focused research, we can provide all children with the best prospects for physical, emotional, intellectual and social health.

Examples of immediate health benefits of early care and education:

- Conducting health and developmental screenings
- Securing medical home routine preventive services by monitoring health forms (immunizations, anemia and lead screening, developmental surveillance)
- Offering mental health consultation
- Engaging in parent coaching
- Providing timely and appropriate referrals
- Linking to health insurance, nutritional supports, financial supports
- Providing limitless health education opportunities for children and their families

Conclusion

Quality early learning programs promote current and future health and well being yielding dramatic improvements in public health. By understanding the opportunities for early interventions in laying the groundwork for future health that exist in early learning settings, we can make sound, cost-effective and proactive investments in the health and well being of our children. Such investments may well represent the most promising opportunities to address our most prevalent public health concerns. Indeed, by investing in quality early learning programs now, we will be setting children on a path of life success that includes health and avoiding the high personal and societal costs of treating morbidities and mortalities later.

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