

Investing in Children's Health

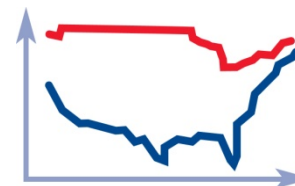
Program of the Women's & Children's Health Policy Center



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JOHNS HOPKINS
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PARTNERSHIP
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“Children are our future!”

- At best: Overused cliché
- At worst: Disingenuous
- Evidence shows that U.S. disinvesting in children
 - (Steuerle, Urban Institute for PAES, 2007)
- How can we make an argument for societal investments in children’s health?
- Evidence needed to transform health system.

1. Components of investment argument related to children's health

- Show that children's health problems are important in childhood & across lifespan;
- More than access to medical care; health shaped by multiple determinants- genetic, social, environmental, economic...
- Link early child health & development/learning;
- Identify effective preventive interventions, promising interventions, and future opportunities;
- Document costs and consequences and net cost-benefits of interventions.

2. Components of investment argument related to children's health

- Demonstrate societal level- not just individual level- benefits;
- Show that early intervention preferable to remediation at later stage (prevent later school failure, crime & addiction, diabetes, etc.);
- Show the consequences of failing to invest at societal level- lost economic productivity, obesity epidemic, health care costs;
- Make case for societal investment vs. individual investment (they're all our kids!)

Methods & approach for PAES Report

- Build on argument- “Neurons to Neighborhoods”
- Selected 4 areas of preschool child health
 - Tobacco exposure (85 papers)
 - Obesity (79 papers)
 - Unintentional injury (61 papers)
 - Mental health (99 papers)
- Systematic review of literature- preventive interventions and CE/CB studies; 1996-2007.
- Economic analyses

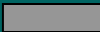
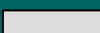
I. Tobacco and Child Health

- Smoking impacts children through:
 - Prenatal exposure (10.2% of babies)
 - Environmental tobacco smoke (25-50%)
 - Teen smoking
- Direct medical cost of all pediatric disease* attributable to parental smoking \$7.9 B (in 2006 dollars)
- \$13.76 billion in loss of life
- Could save \$1 billion in direct medical costs with a 15% reduction in parental smoking

* Birth to 18
Low birth weight, SIDS, RSV, otitis media, asthma, burns

Lifespan: Tobacco Impact and Prevention

| <i>Lifespan Stage Intervention and Impact</i> | | | | <i>Impact of Early Intervention</i> |
|---|---|--|---|-------------------------------------|
| Level of Intervention | Preconception/ Pregnancy | Infant / Childhood | Adolescence | Adulthood |
| Individual | Smoking cessation therapy ¹ | | Smoking cessation therapy ² | |
| | Smoking cessation therapy with partner support ³ | | | |
| | Smoking cessation therapy with relapse ⁴ | | | |
| Family | | Smoking cessation for adults living with children ⁵ | | |
| Local / Community / Workplace / School | | | Media campaigns ⁶ | |
| | Bans / restrictions in workplace and public ⁷ | | | |
| | | | Community mobilization ⁸ | |
| National / State | | | Price increases ⁹ | |
| | | | Enforcement of age ban on sales ¹⁰ | |

-  Age period when interventions take place
-  Age period with continuing positive impacts of intervention

II. Obesity and Child Health

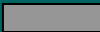
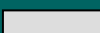
- Emerging major public health problem
 - Obesity tripled in 20 years (5% to 14%)
- Patterns of obesity begin in childhood
 - 17-18% of children and youth overweight (2006)
 - Overweight preschoolers- 5 times more likely to be overweight at 12
 - 50-80% of child & adol obesity persists into adult
- Implications for lifetime of health problems
 - Links to type 2 diabetes, cardiovascular diseases, pregnancy complications

Costs of Overweight Children

- Early stage to assess cost of obesity “epidemic”
 - Cost estimate: Direct \$109B; Indirect \$75B (2006 dollars); Medicare and Medicaid cover 50%
- Four-fold increase in obesity-related hospital costs for children age 6-17 from 1979-1999
 - \$44 M in 1979 to \$160 M in 1999 (in 2006 dollars)
- Difficult to ascertain indirect costs
- For every 1,000 children aged 5-18, excess spending is \$25,688 per year due to unhealthy weight

Lifespan: Obesity Impact and Prevention

| Level of Intervention | <i>Lifespan Stage Intervention and Impact</i> | | | <i>Impact of Early Intervention</i> |
|---|---|------------------------------------|-------------|-------------------------------------|
| | Preconception/ Pregnancy | Infant / Childhood | Adolescence | Adulthood |
| Individual | Observational Studies ¹ | | | |
| | | Observational Studies ² | | |
| Family | | Preschool Education ³ | | |
| | | Parent Education ⁴ | | |
| Local / Community / Workplace / School | | Teacher curriculum ⁵ | | |
| National / State | | | | |

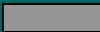

-  Age period when interventions take place
-  Age period with continuing positive impacts of intervention

III. Injuries and Child Health

- Magnitude of the problem
 - Leading causes of child death- 15,755 in 2004
 - Leading causes of hospitalization- 240,000 (<15yo)
 - Leading causes of ER visits- 9 million
 - Leading cause of disability- 150,000 permanent
- Cost of child injury:
 - Unintentional injury (1996): \$21 billion in lifetime medical costs, \$99 billion in work loss (in 2006 dollars)
- Trends in injury reduction:
 - 52% decrease between 1979 and 1998
 - Current approaches: public health education, safety behavior, environmental engineering, EMS

Lifespan: Impact of Injury Prevention

| Level of Intervention | <i>Lifespan Stage Intervention and Impact</i> | | | <i>Impact of Early Intervention</i> |
|---|---|---|-------------|-------------------------------------|
| | Preconception/ Pregnancy | Infant / Childhood | Adolescence | Adulthood |
| Individual | | Gun safety education ¹ | | |
| Family | | Home visits ² | | |
| | | Prenatal home visitation ³ | | |
| | | Education against the use of baby walkers ⁴ | | |
| Local / Community / Workplace / School | | Community education combined with incentives distribution for safety ⁵ | | |
| | | Smoke detector distribution | | |
| National / State | | Changes in baby walker safety standards ⁶ | | |
| | | Child passenger safety laws ⁷ | | |

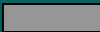
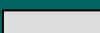
-  Age period when interventions take place
-  Age period with continuing positive impacts of intervention

IV. Mental Health Disorders

- Magnitude of the problem
 - Estimate about 20% of children had at least mild mental functional impairments.
 - For children between the ages of 1-6 years old:
 - 3.4%-6.6% have externalizing behaviors
 - 3.0%-6.6% have internalizing behaviors
- Cost of child mental health disorders
 - The estimated cost of treating children aged 1-5 nationwide approached \$698 million dollars [\$864 million in 2006 dollar value].
 - The estimated cost of unresolved conduct disorder can exceed £1 million [\$1.9 million in 2006 U.S. dollars] over an individual's life.

Lifespan: Impact of Interventions for Mental Health Disorders

| Level of Intervention | Lifespan Stage Intervention and Impact | | | Impact of Early Intervention |
|---|--|--|-------------|------------------------------|
| | Preconception/ Pregnancy | Infant / Childhood | Adolescence | Adulthood |
| Individual | | Child-focused training ¹ | | |
| | | Parent support programs: Healthy Steps ² | | |
| | | Parent-focused training programs; <i>Triple P</i> ^{3,4,5} | | |
| Family | | Parent- and child-focused training programs ⁶ | | |
| Local / Community / Workplace / School | | School-based: Fast Track ⁷ | | |
| National / State | | New Hope ⁸ | | |

-  Age period when interventions take place
-  Age period with continuing positive impacts of intervention

What we've learned

- The evidence for the disease burden, economic costs and long-term consequences of health problems among preschoolers is compelling.
- Enough evidence to indicate that (particularly for tobacco control and injury prevention) cost-effective interventions are available.
- Effective interventions have potential for major reductions in future costs and disease consequences.

What we've learned (continued)

- Unfortunately, have not invested in more research on these and other important health problems and on their prevention.
- Across all four health problem areas, more high-quality intervention studies needed to demonstrate long-term effects.
- Need to adopt an “investment” approach to early child health.

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