

Election 2008: A National Agenda for America's Children and Adolescents

Research as the Foundation for Improving Child and Adolescent Health

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Dr. Hay has documented that he has nothing to disclose.

Research is fundamental to solving problems that impair child and adolescent health.

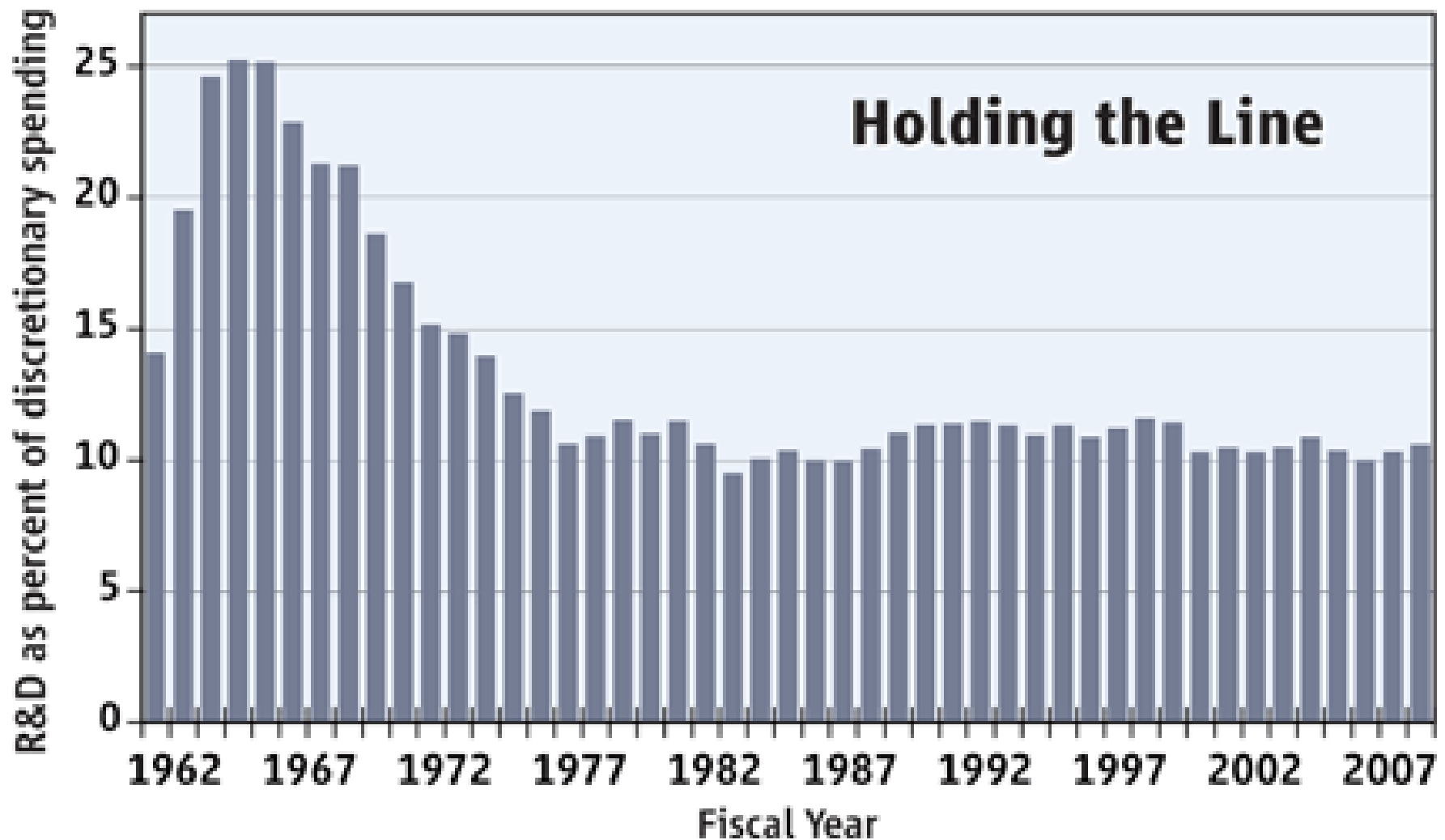
Children are for the most part healthy compared to aging adults with end of life diseases that produce major morbidity and death.

But it is a myth that children are free of diseases,

diseases that limit the capacity for healthy growth and development and the ability to contribute successfully to the environment—

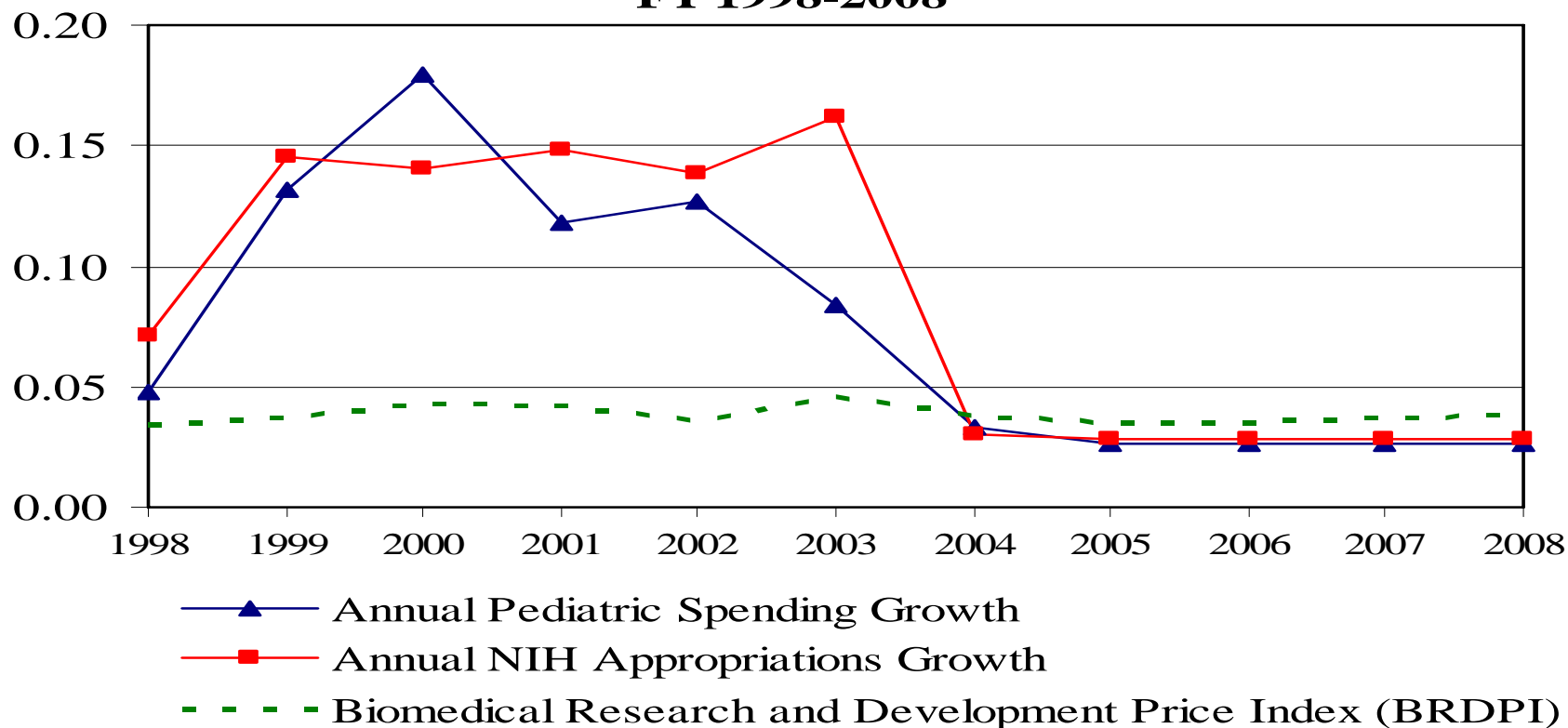
over the entire lifespan—and on to future generations.

Despite such high and increasing Health Expenditures, the share of US discretionary spending going to research has not changed much since the days of the Apollo program.



From 2008 U.S. Budget Request (Figure from Mervis J, Science 316: 817, 2007)

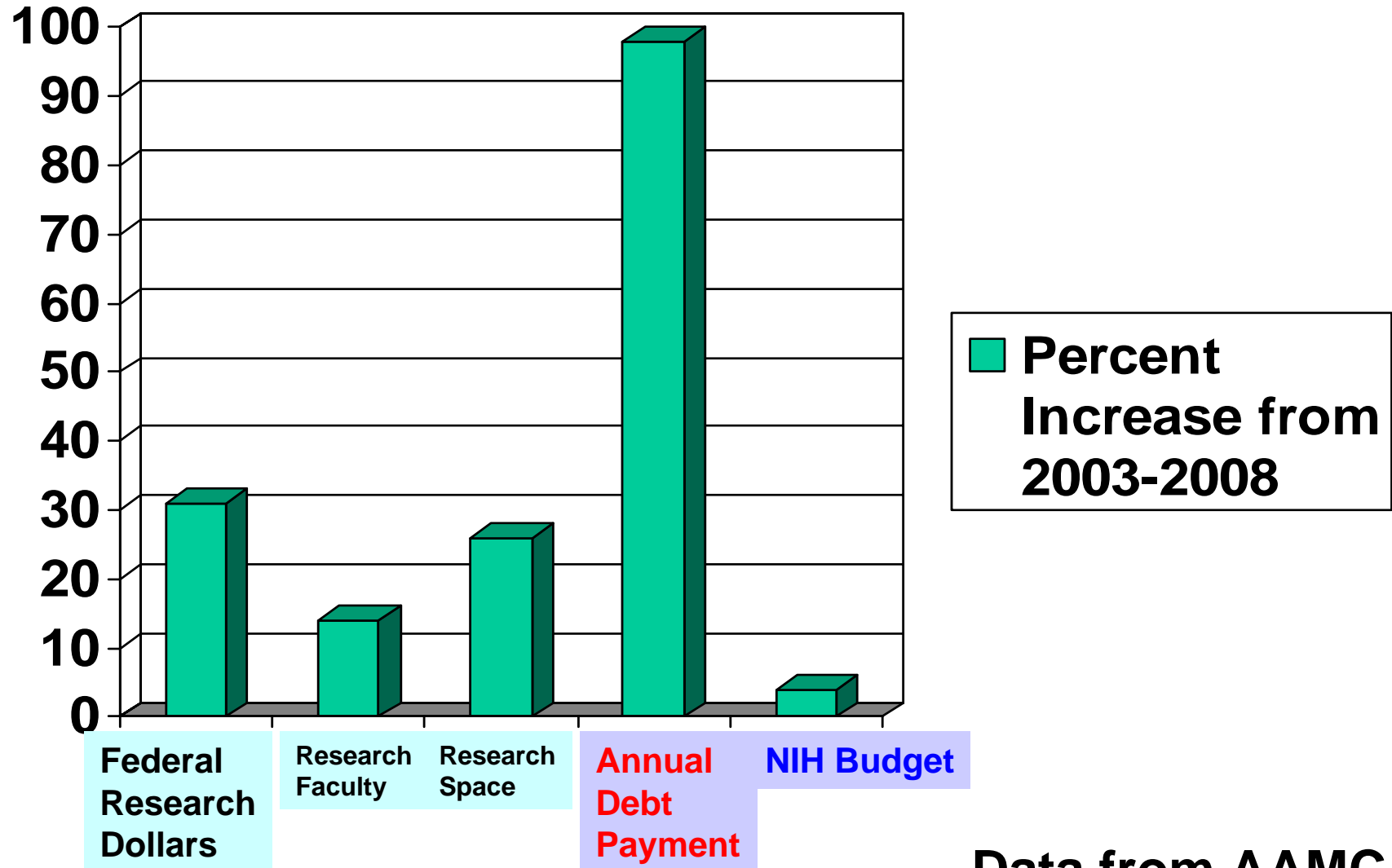
**Exhibit 10: Annual Nominal Growth Rates for NIH
Budget, Pediatric Portfolio, and BRDPI Index,
FY 1998-2008**



Source: NIH Budget Office: History of Congressional Appropriations (1993-2004, 2008 estimate); Pediatric Research Spending (1993-2003, 2004-2008 estimates); Biomedical Research and Development Price Index (BRDPI), FY 2005-2008.

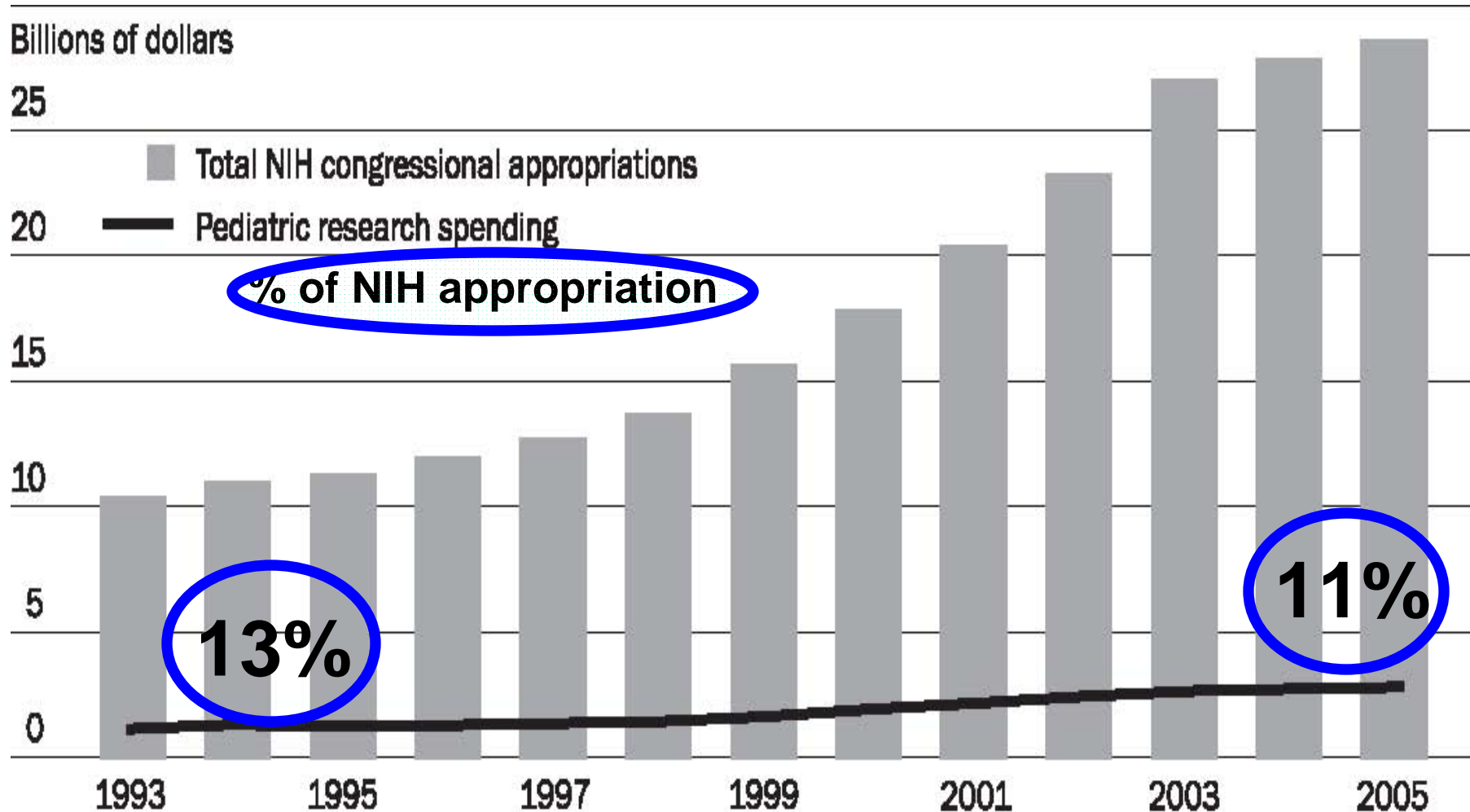
Note: All growth rates are based on nominal dollars.

Medical School Growth Since NIH Doubling (1998-2003)



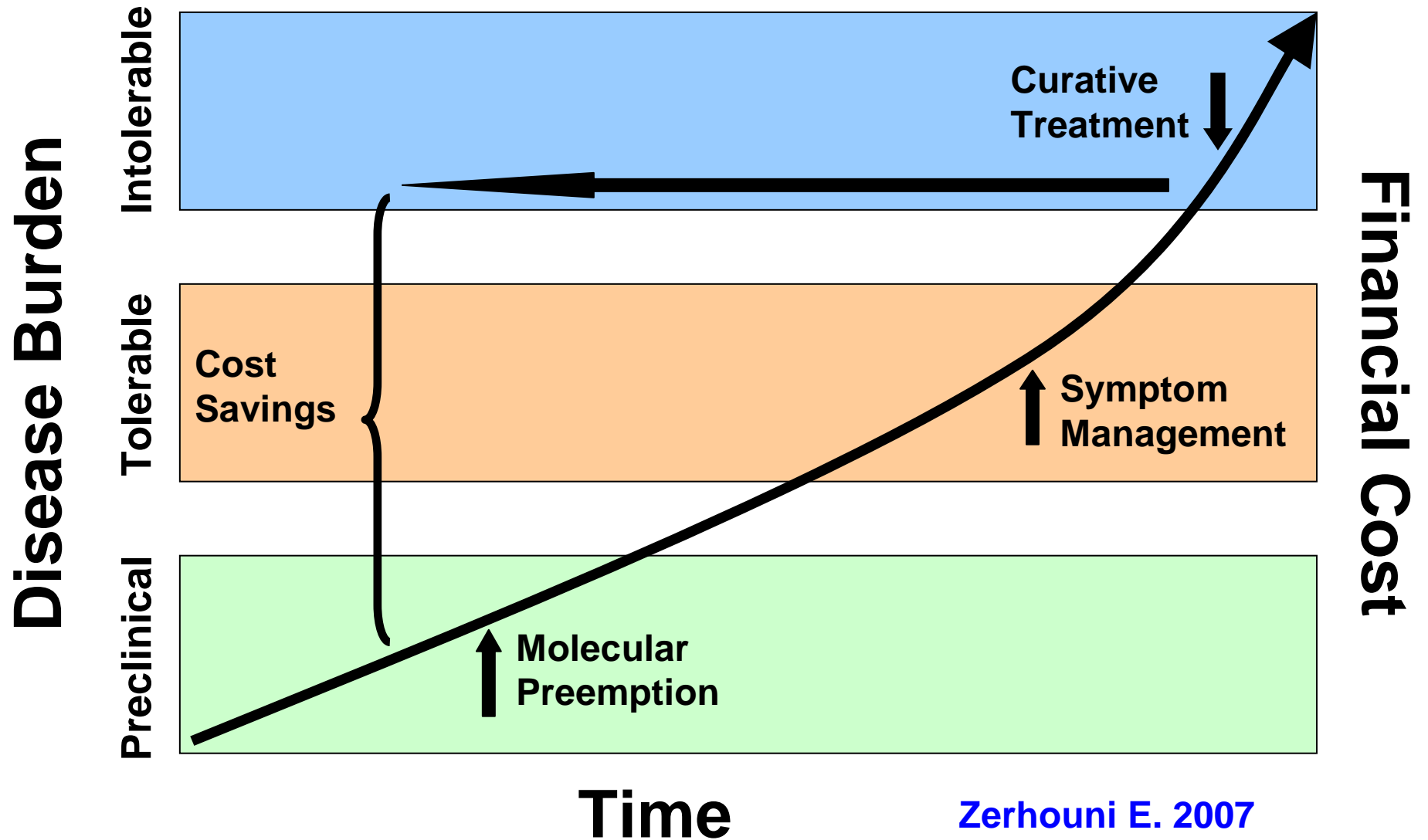
Data from AAMC

EXHIBIT 2. National Institutes Of Health (NIH) Appropriations And Pediatric Research Portfolio, Billions Of Dollars, Fiscal Years 1993–05



Gitterman DP, et al. Health Aff 2004;23:113-24.

The Future Paradigm: *Preempt Disease*



Burden of Preterm Birth and Low Birth Weight

- Total cost in **2005: \$26.2 billion** (\$51,600/preterm birth)
(Note--NIH budget in 2008 ~ \$29 billion)

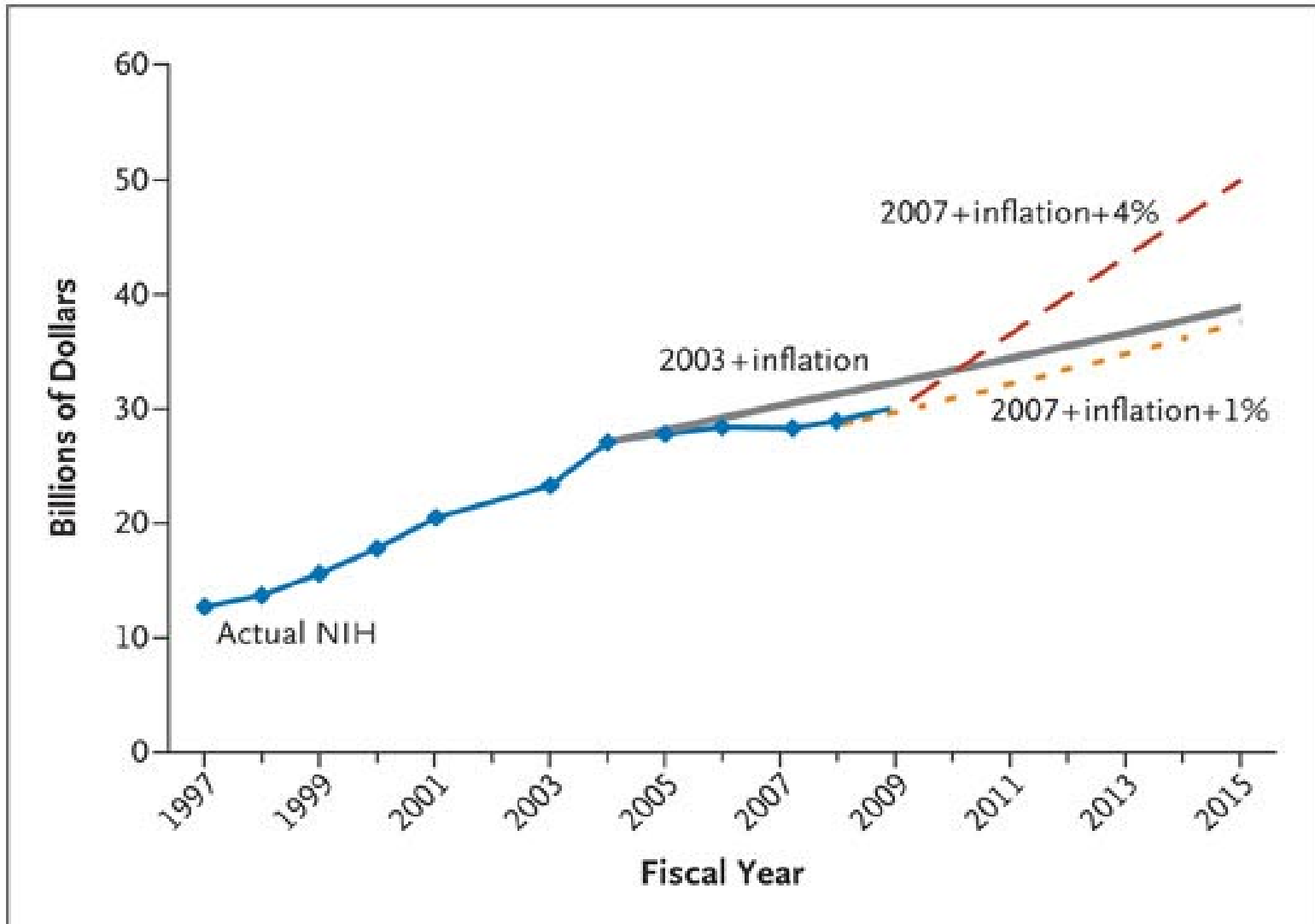
Preterm Birth: Causes, Consequences, and Prevention. Behrman, et al., eds. IOM, 2006.

- Increased the risk of dropping out of high school by one-third
- Reduced annual earnings by almost 15 percent in adulthood
- Increased health problems in 30s and 40s.
- 30% less likely to be in “excellent or very good” health during childhood
- Score significantly lower on reading and math achievement tests
- Earlier death; poor reproduction
- Poor economic status of parents at the time of pregnancy leads to worse birth outcomes for their children, perpetuating a health and socioeconomic crisis in future generations

Johnson RC & Schoeni RF. The Influence of Early-Life Events on Human Capital, Health Status, and Labor Market Outcomes Over the Life Course.

National Poverty Center Working Paper Series #07-05, February 2007

**Increase NIH appropriations to catch up and then meet inflation.
But—everyone wants this approach!**



Heinig et al. NEJM 357: 1042, 2007

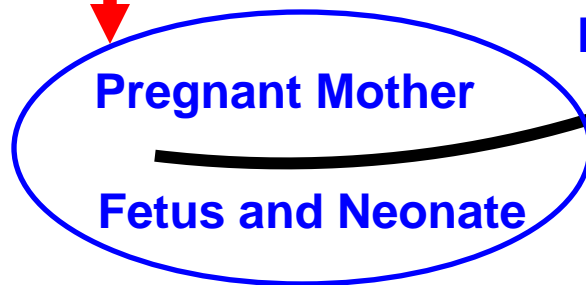
Specific Recommendations

- **Add new dollars to the Pediatric Research Initiative of the Children's Health Act of 2000.**
- **Ensure full funding for The National Children's Study.**
- **Add new money to NICHD and other NIH Institutes for basic research and research career training awards) in pediatrics.**
- **Require pediatric components with dedicated funding for all NIH Roadmap initiatives.**
- **Add new funds specifically for pediatric clinical translational research to the Clinical Translational Science Award Program.**
- **National Pediatric Research Consortia Bill**

The Unique Advantage of Research in Early Life

Preempt life-long diseases that begin during pregnancy and early life development

Genetic diseases
IUGR/ Fetal Obesity
Lung inflammation/Antibiotics
Nutrient deficiencies
"Drug" effects



Infant

Child

Adolescent

Young Adult

Older Age

Prevent lifespan of disease burden and financial cost.

Chronic disability
Obesity
Type 2 diabetes
CV disease
Asthma
Cognitive and Psychiatric disorders
Behavior disorders

