

**EARLY** BRAIN &  
BIOLOGICAL  
DEVELOPMENT:  
A SCIENCE IN  
SOCIETY SYMPOSIUM

## Putting in Place Early Childhood Programs that Work

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# Scaling Programs that Work is Key

“... nearly every problem has been solved by someone, somewhere. The challenge of the 21<sup>st</sup> century is to find out what works and scale it up”

President Bill Clinton (1993)



# Overview of Remarks

Observations on the Effectiveness and Efficiency of Early Childhood/Prevention Programs

Why do we so seldom we do what works ?

- Knowing what works is hard
- What works for whom and where?
- What are the active ingredients and contextual factors that matter?
- Fragmentation in delivery and financing

New Ideas on Financing

Implication for improving matters



# Many Effective/Efficient Programs Exist

Early Childhood Education for Low Income 3 and 4 year olds

HIPPY

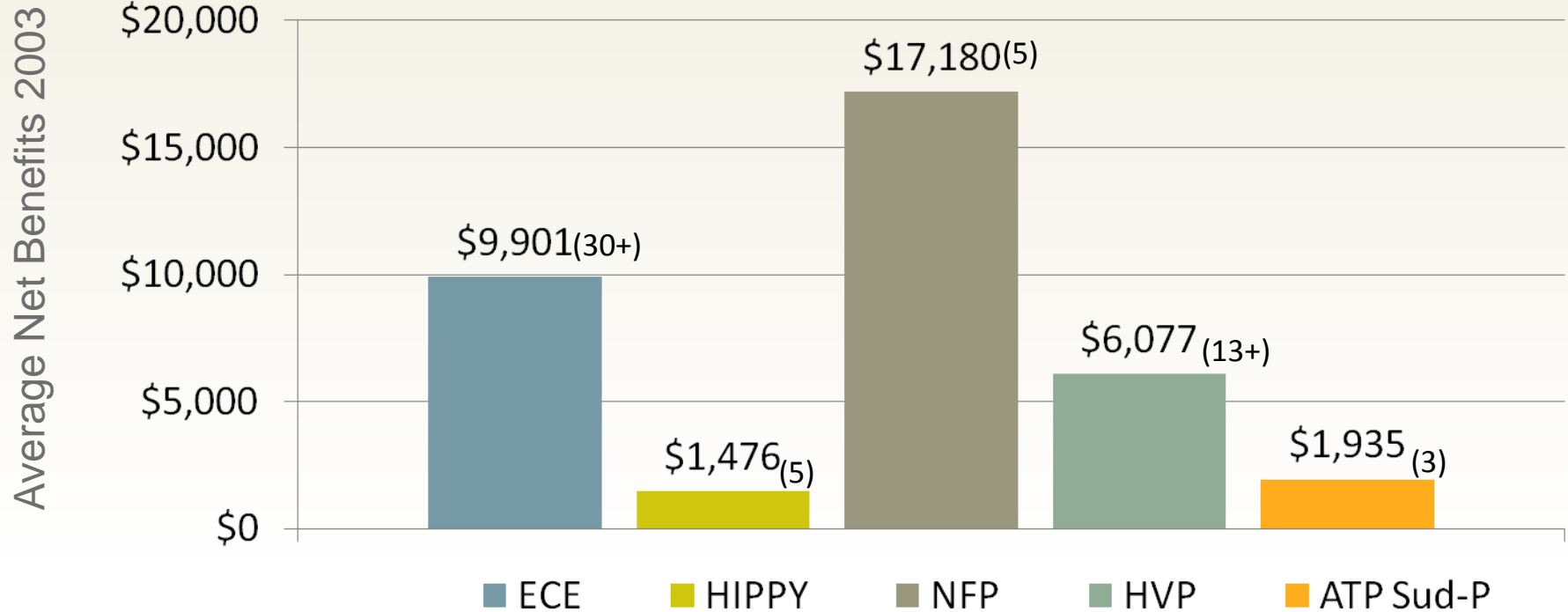
Nurse Family Partnership for Low Income Women

Home Visiting programs for At-Risk Mothers and Children

Abcederian/Perry Pre-School/Chicago Child-Parent centers



# Example of Cost Benefit Results



# Doing What Works

Why is it so rare that we implement what works on a large scale?

Example: home visiting program was enacted as part of U.S. health reform 33 years after first randomized trial showed net social benefits (Liebman; 2011)

Consider the size of the foregone benefits and budget savings from failure and delays in implementation



# Impediments

Knowing what will work is hard

There is great heterogeneity in needy populations and program environments, so targeting frequently matters a lot

Identifying active ingredients so that a program can work outside of a specific leadership and cultural context is difficult

Fragmentation in Financing alters the economic decision making of individuals and organizations



# Finding Out What Works

In publicly sponsored programs that serve disadvantaged children and families mechanisms for sorting out what works are less powerful than in private markets

Gains to social innovators are modest compared to commercial markets

Efficacy vs. Effectiveness results and their relevance

Diffuse data/analysis of innovations makes identification of strong candidate innovations hard

- PCORI/NICE are public health sector responses





# Heterogeneity and Targeting

Programs are frequently designed with target populations in mind

Programs are implemented in political and human environments where there is great unmet need

- Mission creep often results

Consequences for program impacts of more or less targeting can be profound



# Targeting and Example

Nurse Family Partnership Target	Benefit/Cost	Social/Net Benefits
Low Risk	1.26	\$1880 (NS)
High Risk	5.70	\$ 34,140
Average	2.24	\$17,180
Early Childhood Education	2.36	\$9,061 (+/- 20%)

Source: Karoly et al (2005)



# Implications

How programs are set up to match populations and services can fundamentally alter program performance results

Public programs often have difficulty in preserving targeting

- Consequence can be making a cost effective demonstration program socially inefficient in practice



# Active Ingredients and Context

Social innovations typically start a small local specialized programs

- Developed by charismatic leader
- Created in the context of a very specific NGO
- Consists of very specific design features some of which are critical to producing outcomes/ some not

Challenge: what does it take to make the innovation work outside of the leadership and cultural environment that spawned it?

- How do we create a Wal-mart version that can be imported and adapted to many environments and contexts
- Olds (NFP) shows that using trained nurses is a critical ingredient; use of paraprofessional reduced effect size by 50%



# Fragmentation in Delivery and Financing

Public health and human services are typically fragmented

- Programs rely on multiple financing streams
- Different agencies/programs carry responsibilities for different sub-populations and services
- Budget impacts of innovations are frequently diffuse

Result: reduced incentives to support and promote specific innovations



# Benefits and Costs of Early Childhood Education Programs

Benefits	Participants	Taxpayers	Others	Total
Crime	\$0	\$2,200	\$2,600	\$4,800
Education	\$7,900	\$2,100	\$2,400	\$12,400
Other	\$1,300	\$500	\$0	\$1,800
Total Benefits	\$9,200	\$4,800	\$5,000	\$19,000
Costs	\$0	\$7,300	\$0	\$ 7,300

Source: Aos et al (2004)



# Observations

Net social benefits = \$11,700

Taxpayer Net social benefits = -\$2500

If funded by education agency; education carries 100% of costs and capture 65% of benefits

Savings and costs fall in very different jurisdictions



# NFP Costs and Benefits

Benefits	Participants	Taxpayers	Others	Total
Crime	\$0	\$7,900	\$8,600	\$16,500
Education	\$3,825	\$805	\$910	\$5,000
Other	\$0	\$800	\$4,900	\$5,700
Total Benefits	\$3,285	\$9,505	\$14,410	\$27,200
Costs	\$0	\$9,120	\$0	\$ 9,120

Source: Aos et al (2004)





# Financing and Public Willingness to Pay

Federal and Local governments face strong political pressures on budgets

This is particularly true during economic down turns

One consequence is that public financing criteria for program adoption may be more stringent than simply improved social efficiency

Implication: socially efficient projects may be overlooked, especially

- When benefit occur in future and costs are incurred today
- When benefits are broadly distributed and costs are concentrated



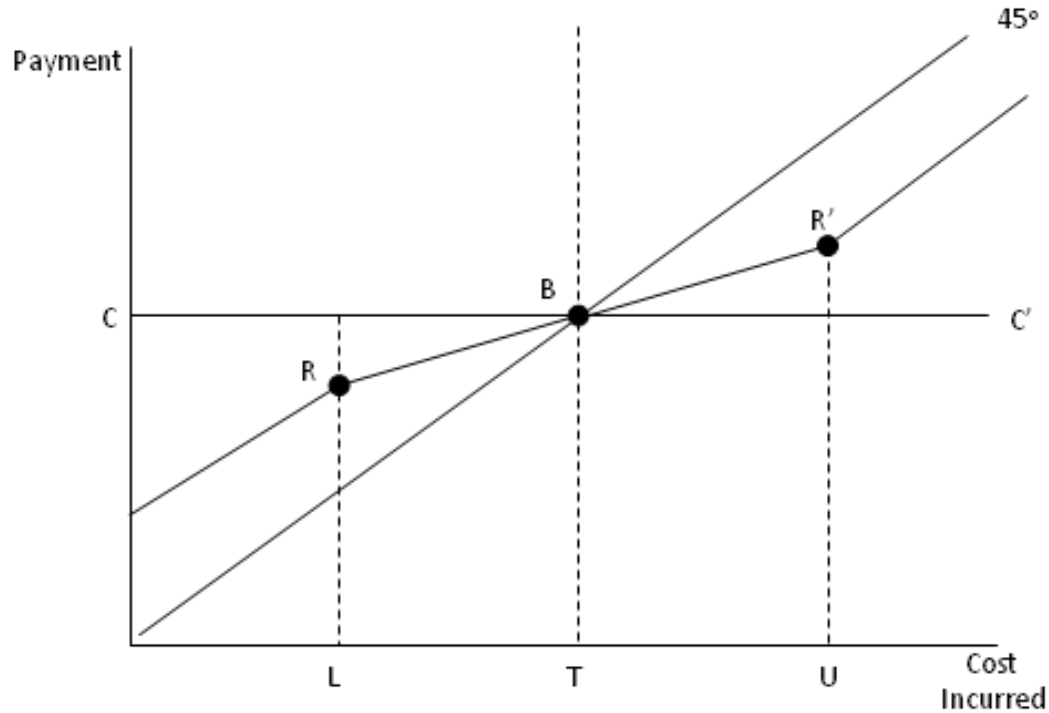
# New Ideas on Financing

Gain Sharing

Social Impact Bonds



# Gain Sharing



- C C' = capitation
- 45° = cost based reimbursement
- T = the spending or cost target
- L = lower bound of risk corridor
- U = upper bound of risk corridor
- U-L = size of risk corridor
- Slope of R R' = risk sharing shares
- T = break even point for all payment systems



# Social Impact Bonds

New idea being tried in criminal justice arena in U.K. (Obama proposal (Liebman, 2011))

- Obama 2012 budget contains funding for SIBs

When the political economy of public budgets require cost-benefit results that exceed social efficiency standards—social impact bonds can help

SIBs are issued by government and offer participating investors pay outs based on the achievement of program outcomes

- Benefits: gets private “up front money” relieving public budgets; uses private sector to police service providers
- A typical outcome might be savings to public budgets (in this case SIBs are akin to gain sharing)
- Several of the early childhood programs show significant criminal justice system savings these could serve as a key performance end point for a SIB



# Implications: What is to be done?

Institutions that gather, assess and report on what works

- NICE and PCORI as models

Evaluation that is attentive to context and heterogeneity

Program design that recognizes and supports targeting

- Identification of good bets

Use of financing models that encourage scaling, offer government mechanisms to reprogram savings and relaxes political pressures

Technical assistance and evaluation services that support adaptation of active ingredients (e.g. NFP national office)



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