Puzzling It Out: The Current State of Scientific Knowledge on Effects of Early Childhood Programs in the United States

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Historical Perspective on Early Childhood Programs in the United States

United States created the first universal public education system almost 200 years ago.

But U.S. lags behind in birth-to-age-5 policy. Why?

1 – Cultural belief that mothers stay home, care for child.

2 – Scientific belief that early exposure makes no difference.

Today, both beliefs no longer hold.

1 – Virtually all mothers trying to work.

2 – Science supports importance of early brain development.

-- one million new brain connections each second in early life

U.S. is now in catchup mode.

Current Status of Early Childhood Programs and Policy in the U.S.

Many creative programs have been developed and tested:

-- Early home visiting and care (Perry, Abecedarian)

-- Pre-kindergarten

Annual spending = $36.6 billion

But few programs have been implemented or tested universally.

Large gaps in access, leading to achievement gaps in school.

Policymakers and business community seek answer:

If we allocate x number of dollars to a community, what is the impact on population-wide education outcomes?

Two Major Early Childhood Priorities

I. Pre-Kindergarten



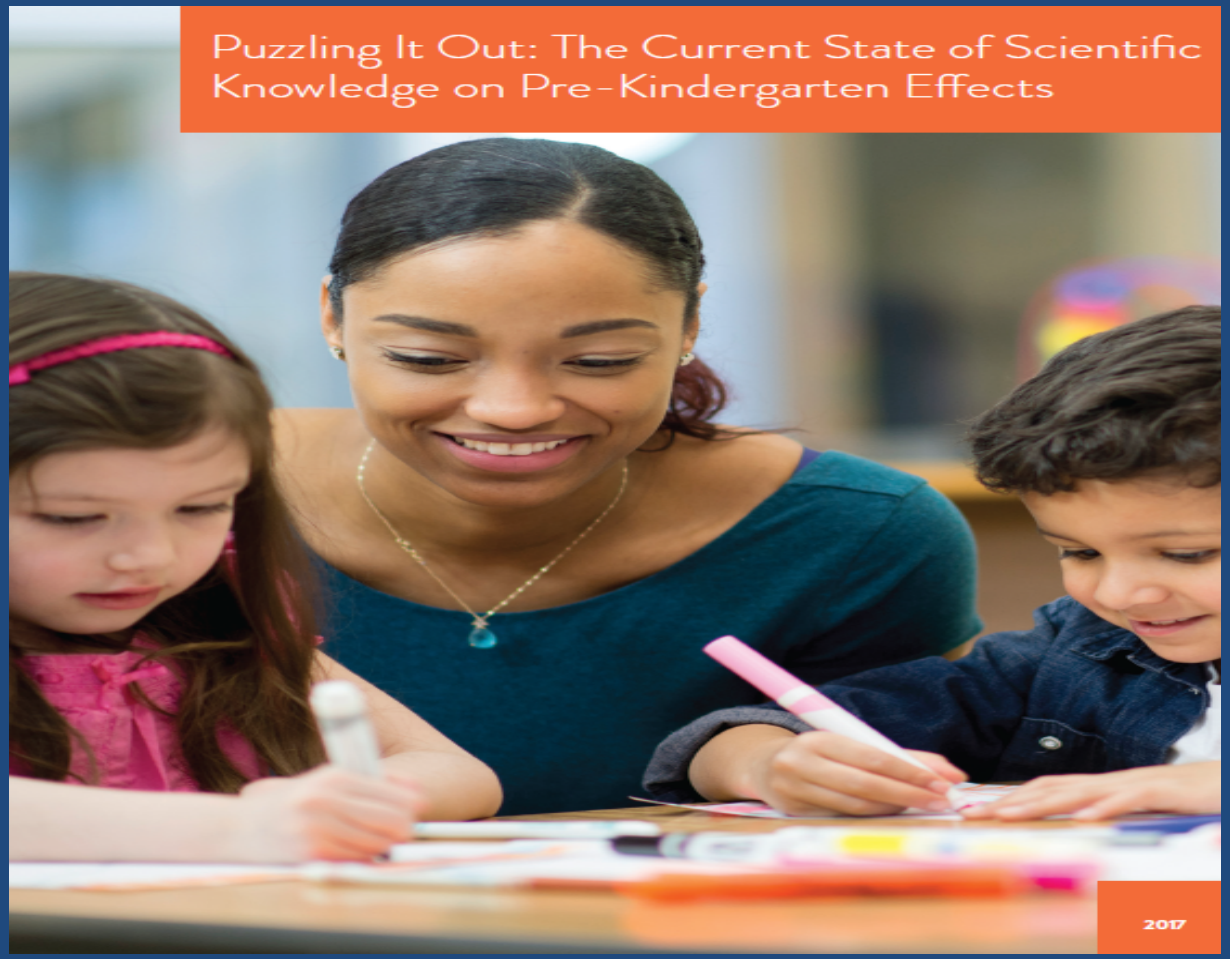
-- one year of education prior to kindergarten
-- wide variability in quality, reach, and penetration
    -- funding varies (Average = $8,628/child served)
    -- reach varies (universal vs. targeted toward poor)

II. Infant home-visiting



-- nurse visits home after birth
-- provides support, connections
-- unknown total impact

Brookings Institution Consensus Review of 50+ Pre-Kindergarten Studies



SIGNATORIES OF THE CONSENSUS STATEMENT ARE: DEBORAH A. PHILLIPS, MARK W. LIPSEY, KENNETH A. DODGE, RON HASKINS, DAPHNA BASSOK, MARGARET R. BURCHINAL, GREG J. DUNCAN, MARK DYNARSKI, KATHERINE A. MAGNUSON AND CHRISTINA WEILAND[1]

Brookings Institution Review: Initial Summary

Site	*Initial Impact*	*Long-Term*
Oklahoma	**reading, math**	**+ at gr 8**
North Carolina	**reading, math**	**+ at gr 5**
Arkansas	**vocabulary**	**+ at gr 3**
Georgia	**reading, math**	**+ at gr 9**
New Jersey	**reading, math**	**+ at gr 5**
Michigan	**readiness**	**+ at gr 12**
Massachusetts	**reading, math**	
Tennessee	**readiness**	**- at gr 3**

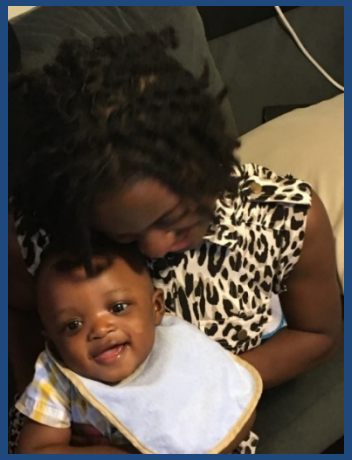


Interpretation of the Evidence

1. It is plausible that all studies are correct.

2. Some programs have better long-term impact than others.

3. Differences in impact are due to differences in:
   -- quality of pre-k program itself
   -- population served
   -- subsequent “sustaining environment”



Brookings Institution Consensus Conclusions on Pre-Kindergarten

"Convincing evidence shows that children attending a diverse array of state and school district pre-K programs are more ready for school at the end of their pre-K year than children who do not attend pre-K."

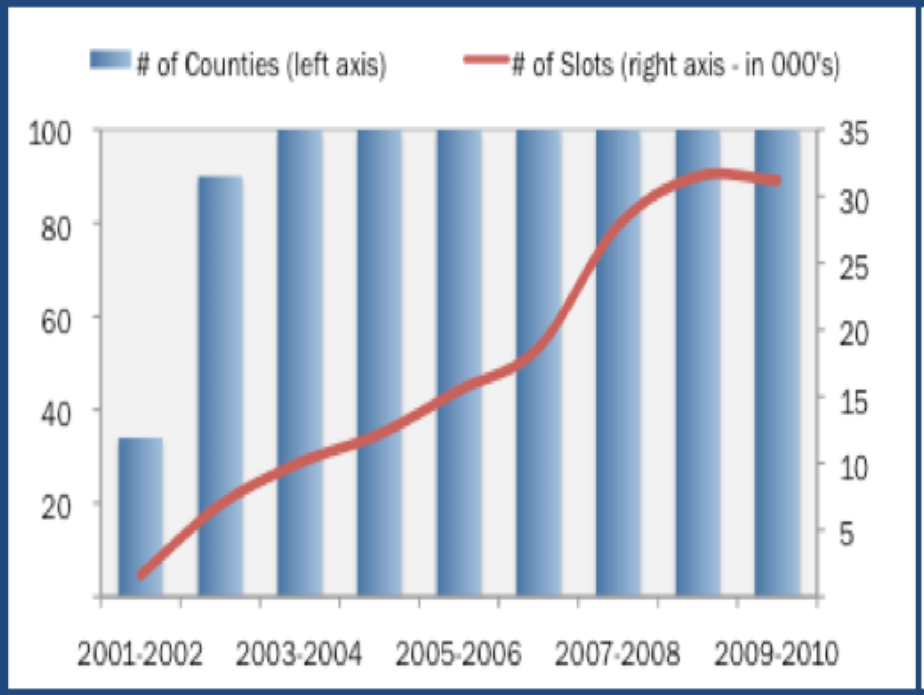
"Convincing evidence on the longer-term impacts of scaled-up pre-K programs on academic outcomes and school progress is sparse, precluding broad conclusions."

"Continued implementation of scaled-up pre-k programs is in order as long as the implementation is accompanied by rigorous evaluation of impact."

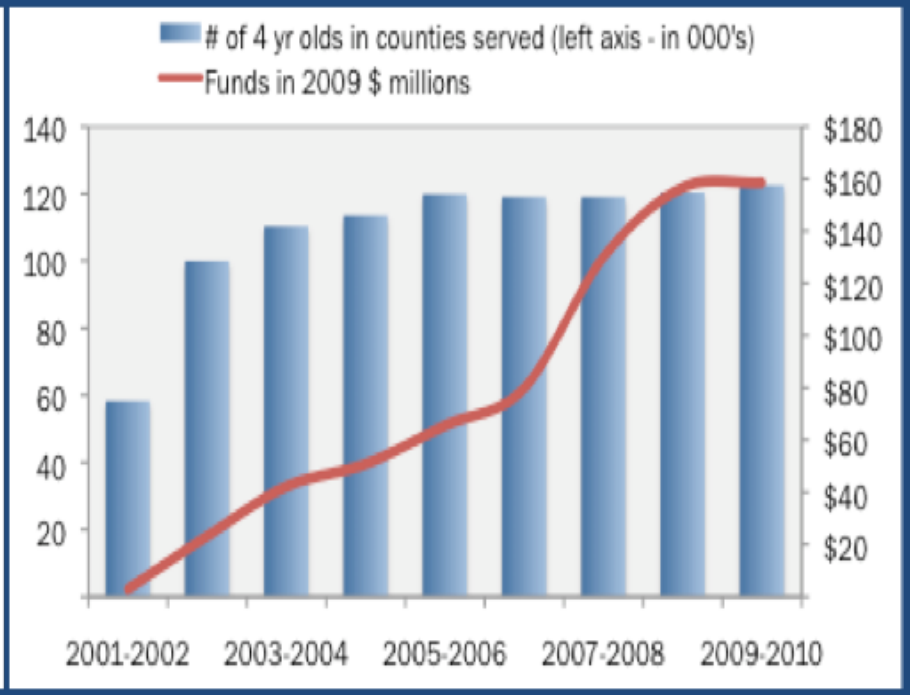
North Carolina's Pre-K Program: More at Four

- State funding for pre-K children aged 4
  - Supports classroom programs in different settings (public schools, for-profit and non-profit child care centers, Head Start)
- Targets "at risk" 4-year olds
  - Eligibility based on poverty status
- Requires collaboration with other local groups – public schools, Smart Start office, child care providers, referral agencies

More at Four is a "Natural Experiment"

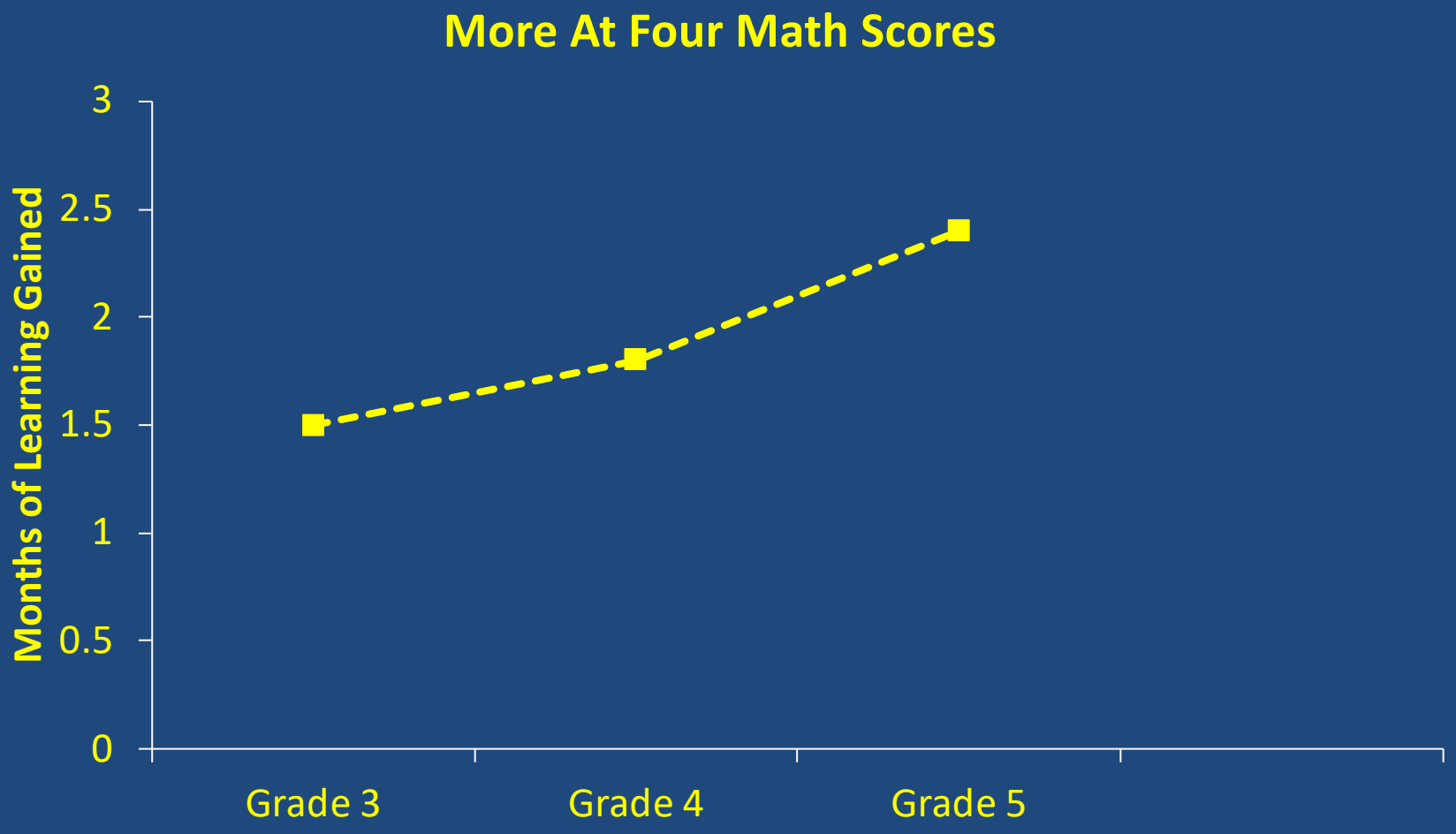


SLOTS

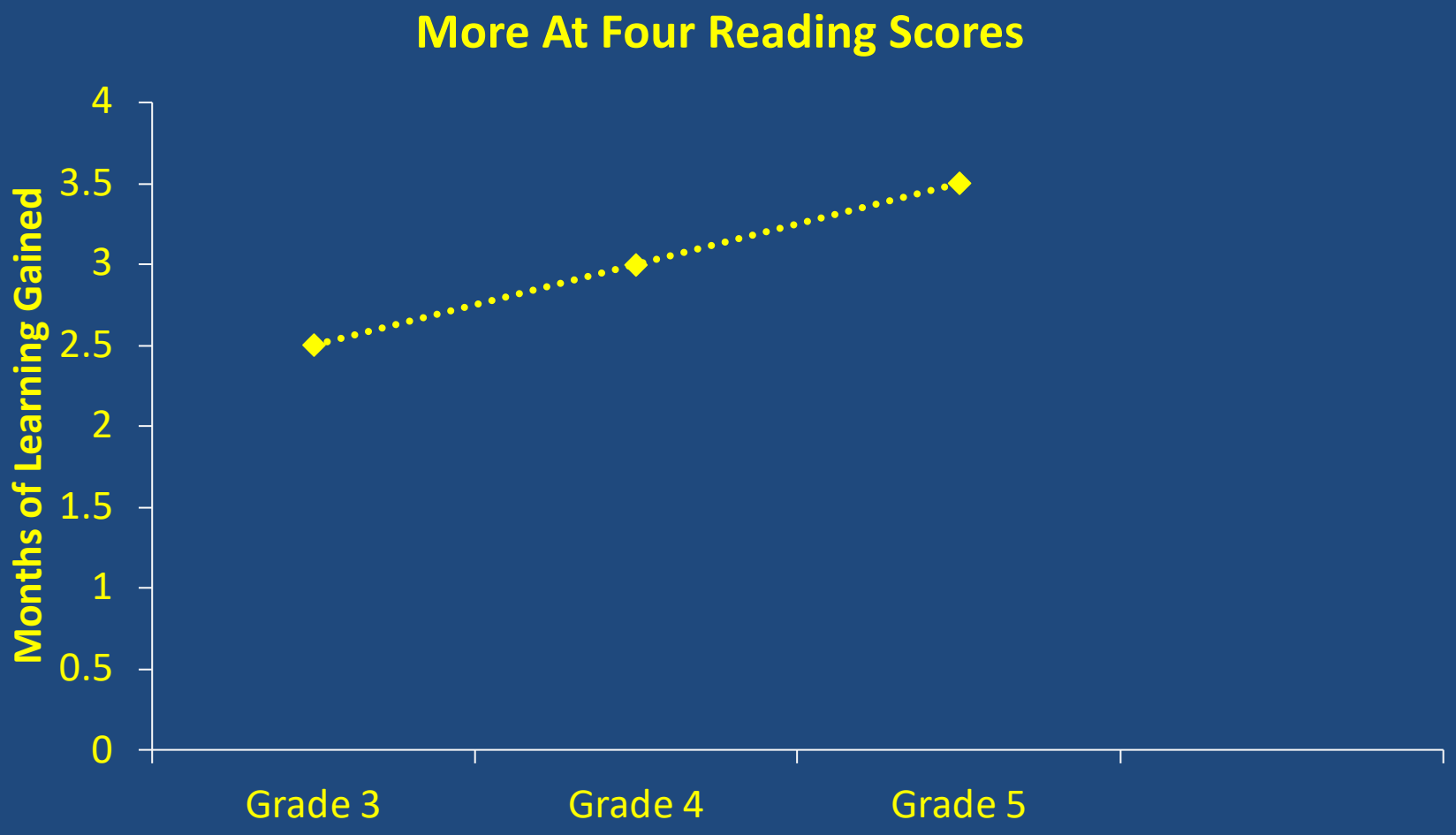


FUNDING

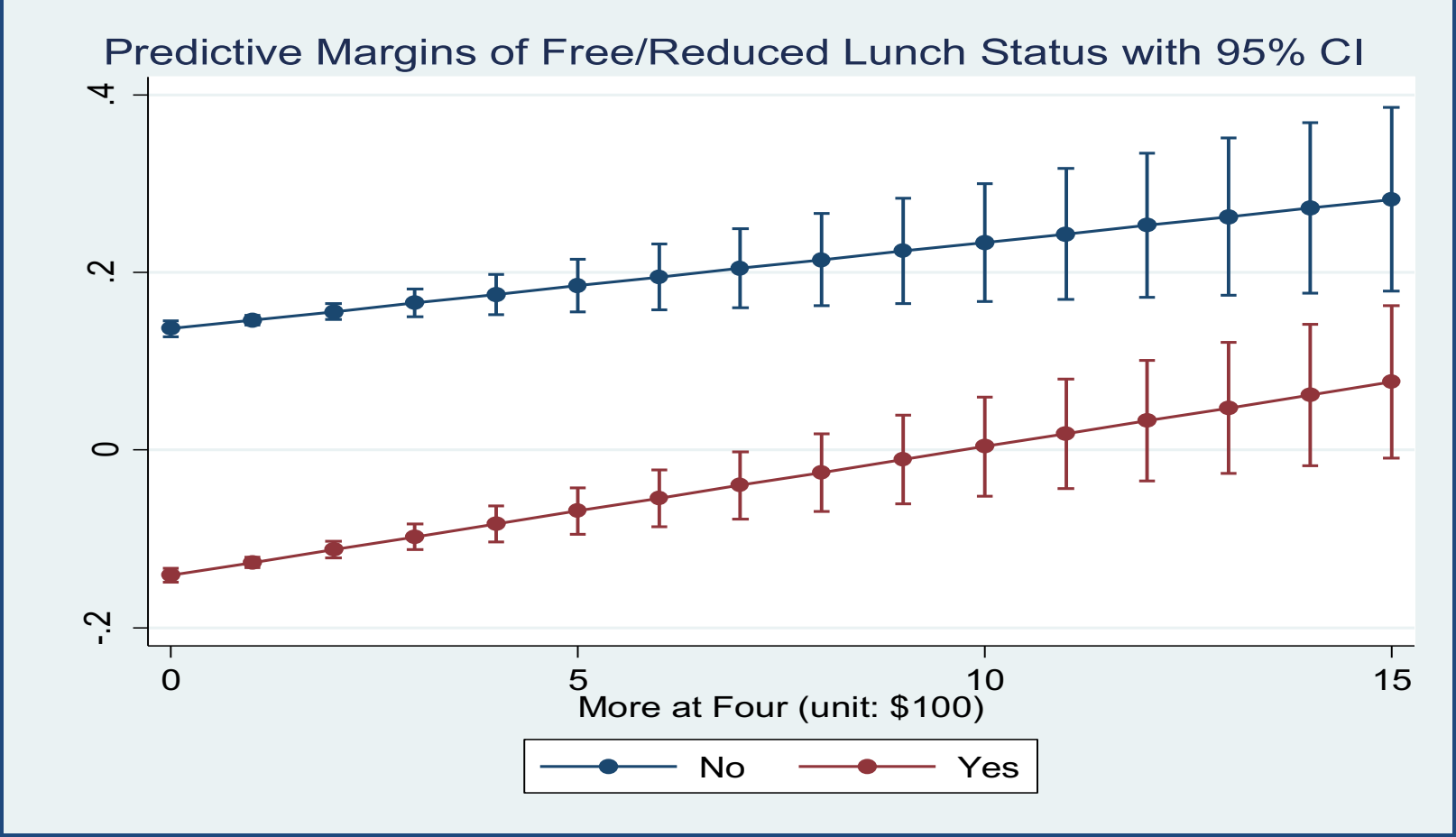
Impact of Average Funding Allocations in Months of Learning in Math



Impact of Average Funding Allocations in Months of Learning in Reading



Impact of More At Four on Grade 5 Math Scores for Low- and High-Poverty Groups



Early Home-Visiting: *Family Connects*



1. Universal reach at birth, to understand needs and connect with community resources
2. Triage very quickly so that families get what they need and not a dollar more
3. Cost is about $500/family
4. Evaluate with randomized controlled trials

The Family Connects Model



Nurse connects with family and identifies needs

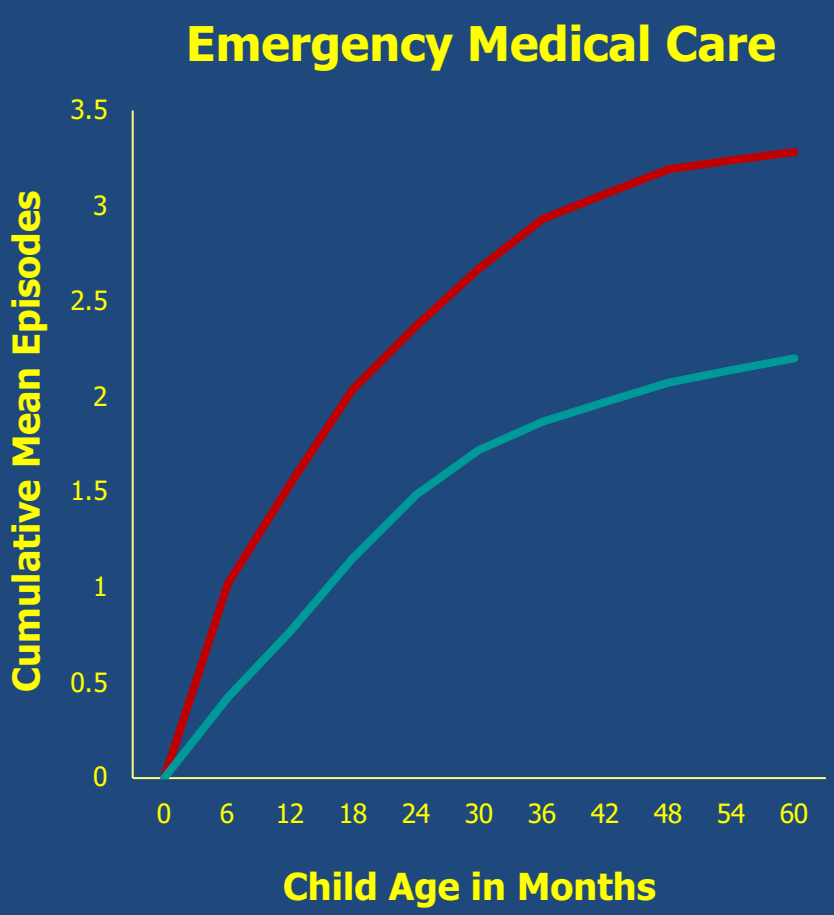


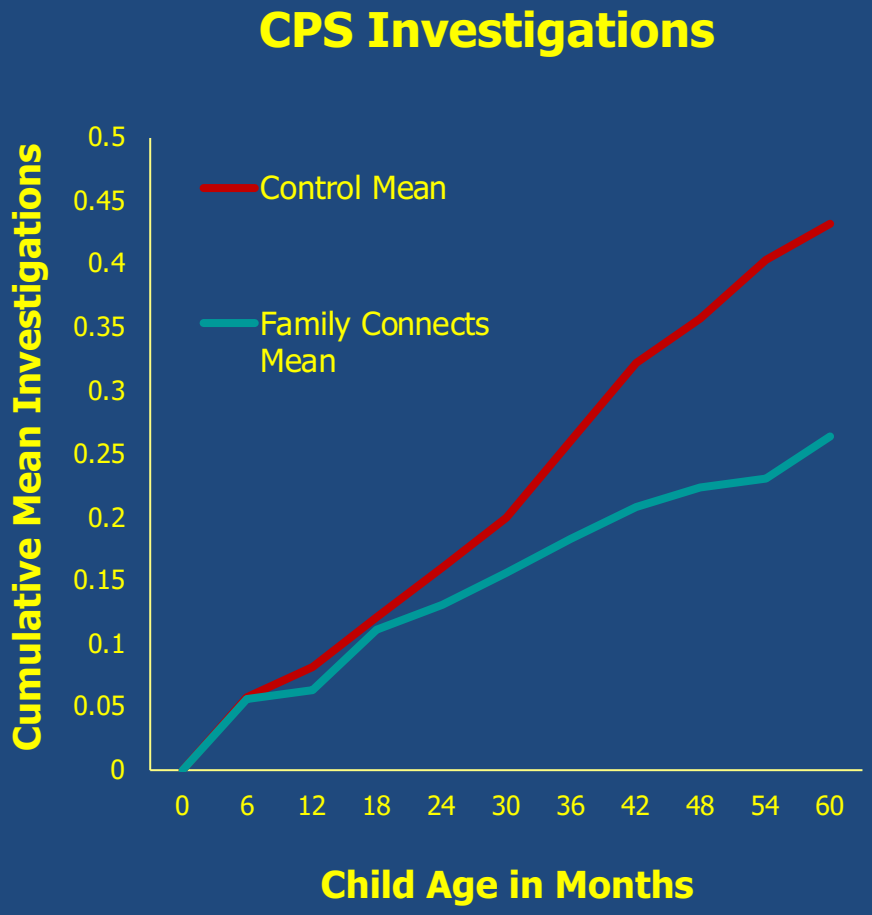
Nurse connects family to community resources



Parent connects with infant

Family Connects Prevents Emergency Health Care Episode and Child Abuse





Goodman, W.B. & Dodge, K.A. (2017).

Conclusions about Early Childhood Programs and Policy in the United States

Long-term impacts of both Pre-K and home visiting vary

-- program quality, population, later support

Benefit-cost analyses generally favorable

-- *Family Connects* return on investment is $3.03

Communities aim to build a new system of care

-- prenatal to school age

-- improve population outcomes

-- like K-12 system of education but age-informed