



Improvement in Cognitive Outcomes for Children Living in Poverty in the Legacy for Children™ Parenting Intervention Five Years Post-Intervention

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APHA 2014 Annual Conference
November 18, 2014
New Orleans, LA

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Disclosures

- ❑ **The findings and conclusions in this presentation are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention**
- ❑ **No relationships to disclose**

Learning Objectives

- ❑ Describe the Legacy for Children™ model and its implementations
- ❑ Discuss the site specific longitudinal Legacy for Children™ cognitive outcomes
- ❑ Explain the public health implications of the Legacy for Children™ model's outcomes

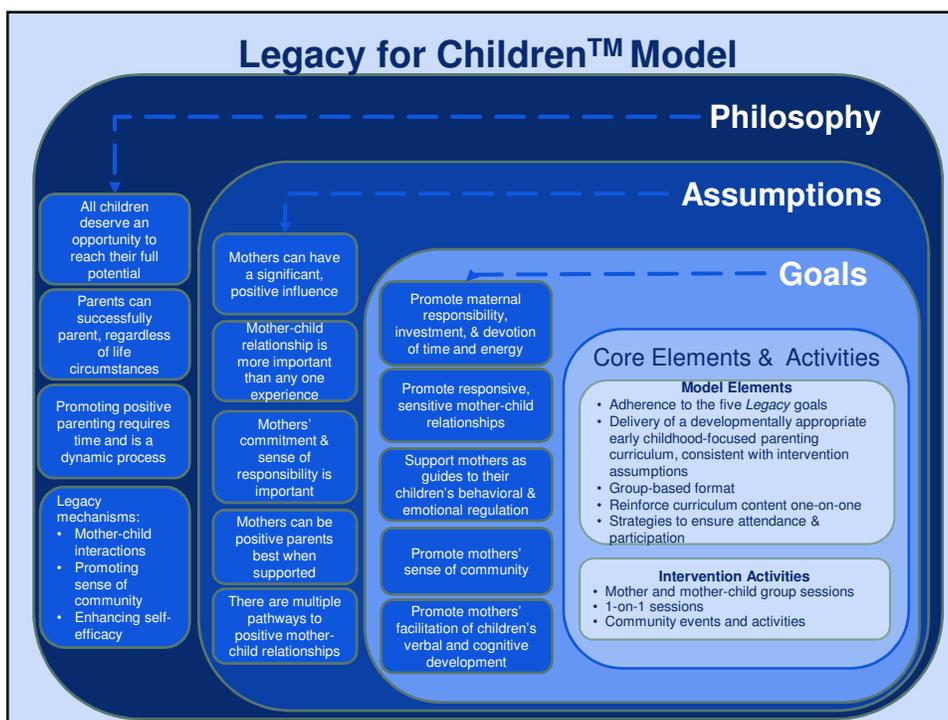
Childhood Poverty as a Childhood Risk Factor



- ❑ More than 16 million US children live in poverty¹
 - ❑ These children...
 - are 1.3 times more likely to experience learning disabilities and developmental delays², and
 - exhibit more neurocognitive disparities with IQ and academic achievement^{3,4}, executive functioning⁵, and language⁶
- ...than their more advantaged peers.**



- **1992:** Emerging literature on effects of poverty on child cognitive outcomes
- **1992-1998:** CDC meetings with other Fed agencies and external experts
- **Prevailing models of early intervention:**
 - high-quality preschools
 - behavioral parent training
 - home visits
- **Conclusion: need a public health approach to improve outcomes for children in poverty by promoting positive parenting practices**



Evaluation

- **Two RCTs: Los Angeles and Miami**
 - Intervention begins prenatal or at birth, ends age 3 or 5
 - ~300 mothers at each site
 - Randomized 3 intervention to 2 comparison
 - Process, cost, outcome data

- **Follow-up study in 3rd/4th grade (2009)**
 - Document the long-term effect of *Legacy* on child outcomes
 - Sample size: 175 (Miami), 179 (LA)



Participants

- **Inclusion criteria:**
 - ≥ 18 years of age
 - live within the catchment areas
 - have custody of the target child
 - speak English
 - have at least some prenatal care
 - have income $< 200\%$ of the poverty level



Maternal Baseline Demographics, at least one cognitive assessment (n= 541 dyads)

Demographic Variable	Miami (Mean or %)	LA (Mean or %)
Maternal Age	22.9	25.4
African-American or Black non-Hispanic	70.4%	45.5%
Hispanic	8.7%	45.5%
HS Diploma or less	89.1%	77.6%
Income <\$20,000/year	59.4%	49.4%
Maternal IQ (KBIT)	79.9	84.0

Cognitive Measures and Methods

- **Kauffman Assessment Battery for Children-II (KABC)**
 - Full scale IQ score
 - 36, 60 months, and ~ 3rd grade
- **Woodcock-Johnson III Tests of Achievement (WJ)**
 - 60 months (Letter-Word, Spelling, Applied Problems subtests)
 - ~ 3rd grade (Letter-Word, Passage Comprehension, Calculations, and Applied Problems subtests)
- **An intent-to-treat approach was used and t-tests compared adjusted mean scores of the intervention and comparison groups by site.**

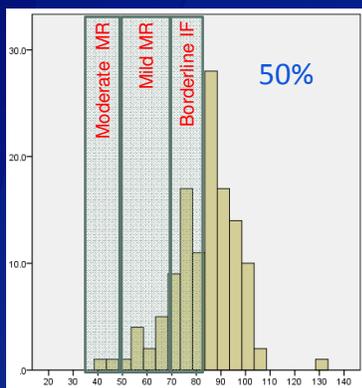


Overview of Significant LA Cognitive Outcomes

- **Intervention group scored on average 5 points higher than the comparison group on the KABC**
 - Age 3 (85.9 vs. 80.2, $p < 0.01$)
 - 3rd Grade (95.0 vs. 89.6, $p < 0.05$)
- **Intervention group scored higher on the WJ subtests:**
 - Age 5 Spelling (101.7 vs. 96.8, $p < 0.05$)
 - 3rd Grade Letter-Word (105.0 vs. 97.4, $p < 0.001$)
 - 3rd Grade Passage Completion (106.0 vs. 103.3, $p < 0.05$)
 - 3rd Grade Applied Problems (96.8 vs. 92.3, $p < 0.05$)

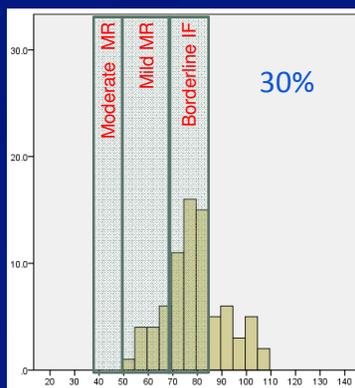
Los Angeles 36 Month KABC Scores

Frequencies of IQ (KABC) scores in Los Angeles at 36 months



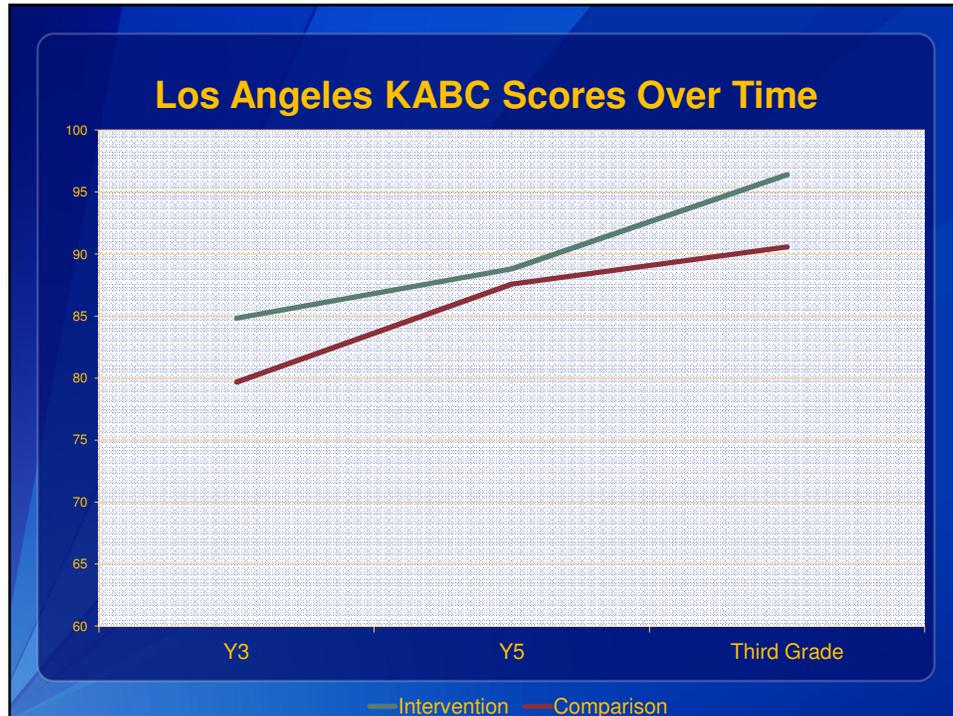
Intervention

(50% of children in the average or above average range for IQ)



Comparison

(30% of children in the average or above average range for IQ)



Take-Home Messages

- ❑ Legacy for Children™ is a group-based , public health approach to improve child health and development through positive parenting
- ❑ Children of mothers participating in the LA site of *Legacy* had significantly higher IQ and achievement scores through third grade, five years post intervention
- ❑ Shifting the developmental trajectory of early cognitive development has immediate and long term implications for child health, educational achievement, and wellbeing
- ❑ Community-based implementation of *Legacy* is currently underway



Acknowledgements

- CDC Team
- Los Angeles Site
- Miami Site
- Longitudinal Follow-Up Study
- Original *Legacy* Staff

...and all of the *Legacy* families.

Thank you!

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More Information on Legacy

❑ Legacy website

- <http://www.cdc.gov/ncbddd/childdevelopment/legacy.html>

❑ Papers

- Perou, R., Elliott, M.N., Visser, S.N., Claussen, A.H., Scott, K.G., Beckwith, L.H., Howard, J., Katz, L.F., Smith, D.C., 2012. Legacy for Children™: a pair of randomized controlled trials of a public health model to improve developmental outcomes among children in poverty. *BMC Public Health* 12, 691.
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❑ Legacy for Children™ POC

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