Shifting the Odds for Low-Income Children: LONGITIDUNAL RESULTS FROM THE EARLY HEAD START RESEARCH AND EVALUATION PROJECT

CYFS Summit on Research in Early Childhood
APRIL 14, 2010

Goals for the Session

1. Provide background on the Early Head Start Study
2. Show results of that study when children were 3 and 5
3. Share "index of success" for children at ages 3 and 5.
4. Examine what factors ***in combination with*** EHS increase the odds of children doing well on the "index of success." We refer to these as stepping stones to success.

Goals for the Session

5. Show how the EHS study has and continues to inform policy program development and understanding of the development of low income children from infancy until 5th Grade

Changing the Odds

Identifying Stepping Stones Towards Maximizing Children's Development

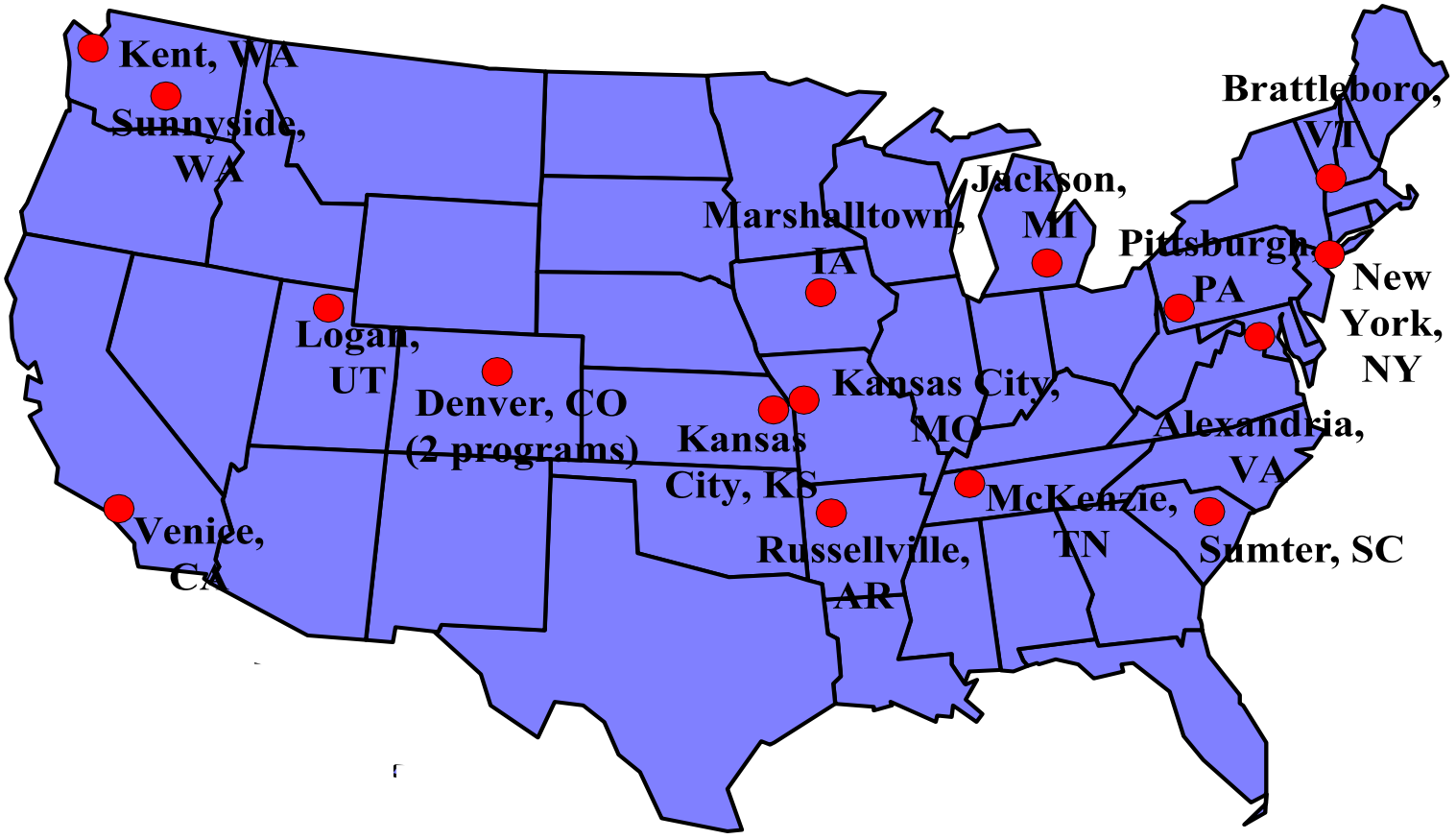
Early Head Start

- Head Start in families with income at or below poverty level with children, 0-3
- Center-based, home-based or combinations
- Two generation services
- Funded in 1994
- Approx 65,000 children in 700 c
- Will double size in 2010
- NE Endowment Programs

The Early Head Start Research and Evaluation Study-funded by the Administration on Children and Families

- 3001 children were randomly assigned to program and control groups soon after EHS began
  - Children were less than one year of age.
  - In 17 diverse EHS programs across US in Waves 1 and 2.
- Follow up assessments at 14, 24, 36, 63 months (and grade 5) plus local research
- Research Consortium- Mathematica Policy Research, National Center on Children and Families, Columbia University and 15 universities.
- Reports to Congress on outcomes; hundreds of papers in refereed journals; special issues of journals; reports back to the program in the Birth to Three Conference of EHS teachers and leaders annually; synthesized findings in Research to Practice Briefs

Early Head Start Research Sites



Research Conducted by Early Head Start Research Consortium

The Consortium consists of representatives from 17 programs participating in the evaluation, 15 local research teams, the evaluation contractors, and ACF/ACYF.

Research institutions in the Consortium (and principal researchers) include ACF (Rachel Chazan Cohen, Judith Jerald, Esther Kresh, Helen Raikes, and Louisa Tarullo); Catholic University of America (Michaela Farber, Lynn Milgram Mayer, Harriet Liebow, Christine Sabatino, Nancy Taylor, Elizabeth Timberlake, and Shavaun Wall); Columbia University (Lisa Berlin, Christy Brady-Smith, Jeanne Brooks-Gunn, and Alison Sidle Fuligni); Harvard University (Catherine Ayoub, Barbara Alexander Pan, and Catherine Snow); Iowa State University (Dee Draper, Gayle Luze, Susan McBride, Carla Peterson); Mathematica Policy Research (Kimberly Boller, Ellen Eliason Kisker, John M. Love, Diane Paulsell, Christine Ross, Peter Schochet, Cheri Vogel, and Welmoet van Kammen); Medical University of South Carolina (Richard Faldowski, Gui-Young Hong, and Susan Pickrel); Michigan State University (Hiram Fitzgerald, Tom Reischl, and Rachel Schiffman); New York University (Mark Spellmann and Catherine Tamis-LeMonda); University of Arkansas (Robert Bradley, Mark Swanson, and Leanne Whiteside-Mansell); University of California, Los Angeles (Carollee Howes and Claire Hamilton); University of Colorado Health Sciences Center (Robert Emde, Jon Korfmacher, JoAnn Robinson, Paul Spicer, and Norman Watt); University of Kansas (Jane Atwater, Judith Carta, and Jean Ann Summers); University of Missouri-Columbia (Mark Fine, Jean Ispa, and Kathy Thornburg); University of Pittsburgh (Carol McAllister, Beth Green, and Robert McCall); University of Washington School of Education (Eduardo Armijo and Joseph Stowitschek); University of Washington School of Nursing (Kathryn Barnard and Susan Spieker); and Utah State University (Lisa Boyce and Lori Roggman).

Impacts at Age 3

- EHS children had significantly better language development (PPVT-III).
- EHS children had better cognitive development (Bayley MDI).
- EHS children had fewer aggressive behavior problems.
- EHS-more attentive during play and better able to engage parents.
- EHS-more likely to receive immunizations.
- EHS parents more often read daily.
- EHS parents were more supportive, less detached during play.
- EHS parents less often spanked their children.
- EHS parents had more supportive home environments.
- EHS parents were more likely to be in school or training.
- EHS parents were more likely to be employed (trends).

- Some of the groups showed even bigger differences between program and control groups—African Americans, enrolled during pregnancy, programs with both home based and center based

Impacts at Age 5

At age 5, some of these significant effects remained even though children had been out of the program for 2 years.

- EHS children more likely to be in formal center-based programs from 3-5.
- EHS children had significantly better approaches towards learning.
- EHS children had (marginally) better observed attention.
- EHS children had fewer aggressive behavior problems.
- Spanish-speaking children had better Spanish vocabulary.
- EHS children had fewer speech problems (trend).
- EHS parents more often read daily to children and children had more books.
- EHS parents engaged in more teaching activities with children.
- Parents had fewer depression symptoms.
- Parents more often attended school events.
- Less likely to be in homes where someone had a drug or alcohol problem (trend).

Shared Goals for Children

What do we want for children? What are the outcomes we desire?

Whole child: positive outcomes in all areas of development

Indexes

Age 3

- Good or Better Health
- PPVT or TVIP $\geq$ 90
- Bayley MDI $\geq$ 90
- Behavior Problems < 24
- Ability to Engage Parent $\geq$ 5
- Sustained attention $\geq$ 5

Age 5

- Good or Better Health
- PPVT or TVIP $\geq$ 90
- WJ Letter Word Recognition $\geq$ 90
- WJ Applied Problems $\geq$ 90
- Westat Behavior Prob $\leq$ 4.0
- Positive Approaches to Learning $\geq$ 12
- Leiter Attention = 10

Who Achieved the Outcomes: Good Outcomes on All Indicators?

Age 3- 15%

Age 5- About 10%

Examining the Inputs—How Else Can We Boost Outcomes?

1. EHS Program Implementation
2. Engagement/High Dosage
3. High School Graduation

Examining the Inputs

4. Mother Provides Stimulating Language
5. Mother is Sensitive and Supportive

Age 3

Stepping Stones to Success at Age 3

- Being in an Well Implemented EHS Program – 1.3X More Likely to be in Successful Group
- Being Highly Engaged in the Program- 1.5 X Greater Chance to be in Success Group
- Mother Completed High School - 2X
- Mother Provides Stimulating Language – 3X
- Mother is Sensitive and Supportive – 3X

Age 5

Examining the Inputs

- Formal Care and Education: Ages 3 and 4

Stepping Stones to Success at Age 5

- Highly Engaged in EHS – 1.4 X More Likely to be in Successful Group
- Mother Completed High School -1.5X
- Attended Pre K (Formal Care) – 1.5X
- Mother is Sensitive and Supportive – 3.3X

And…

- If included in the analysis, High Group at age 3- 6X

What Happens When You Stack the Stepping Stones?

- No One Factor by Itself may be Enough
- It might be better to call them…

…Stair Steps to Success

And Add the Success Factors in the Indexes

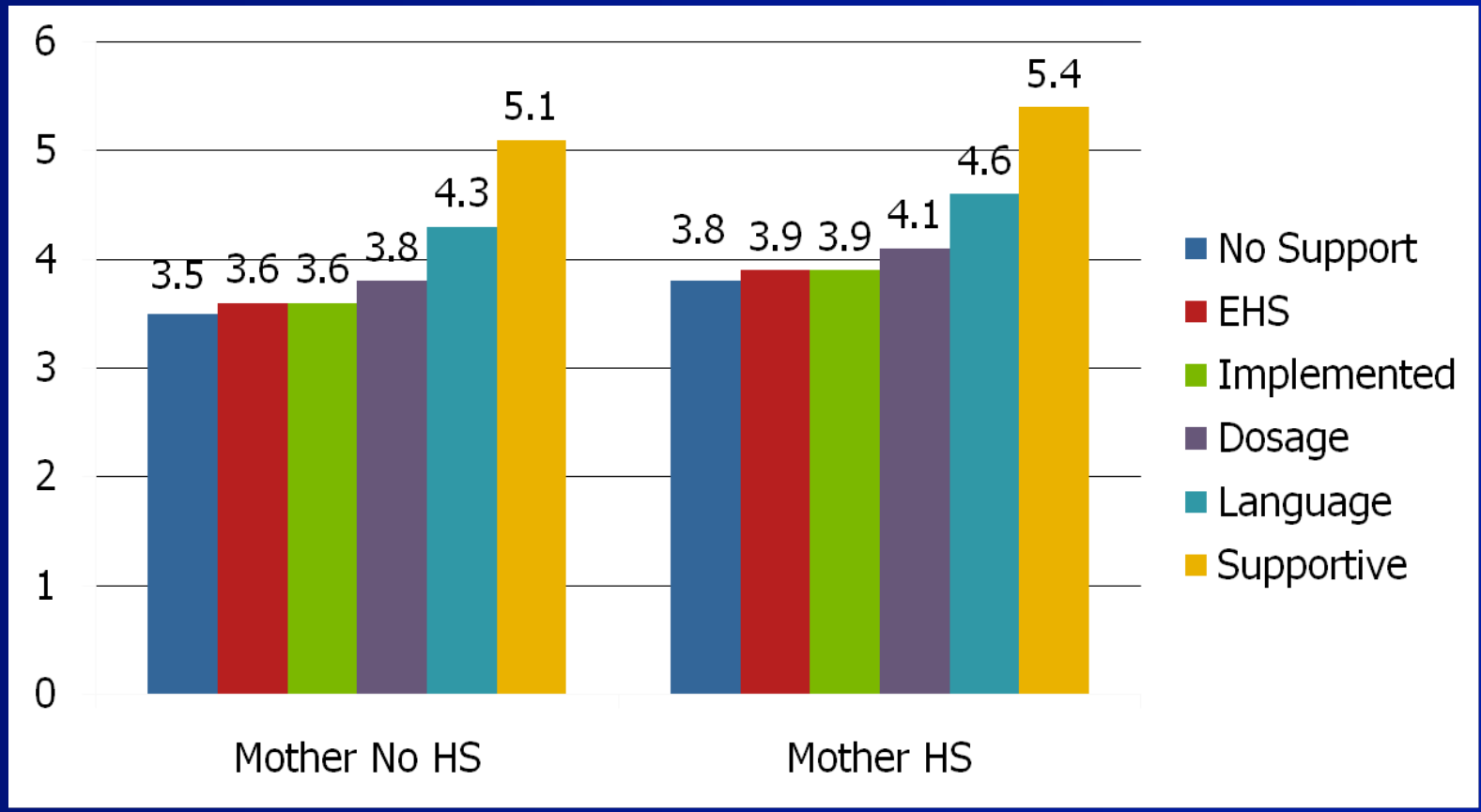
Age 3- 6 possible

- Good or Better Health
- PPVT or TVIP $\geq$ 90
- Bayley MDI $\geq$ 90
- Behavior Problems < 24
- Ability to Engage Parent > 5
- Sustained attention $\geq$ 5

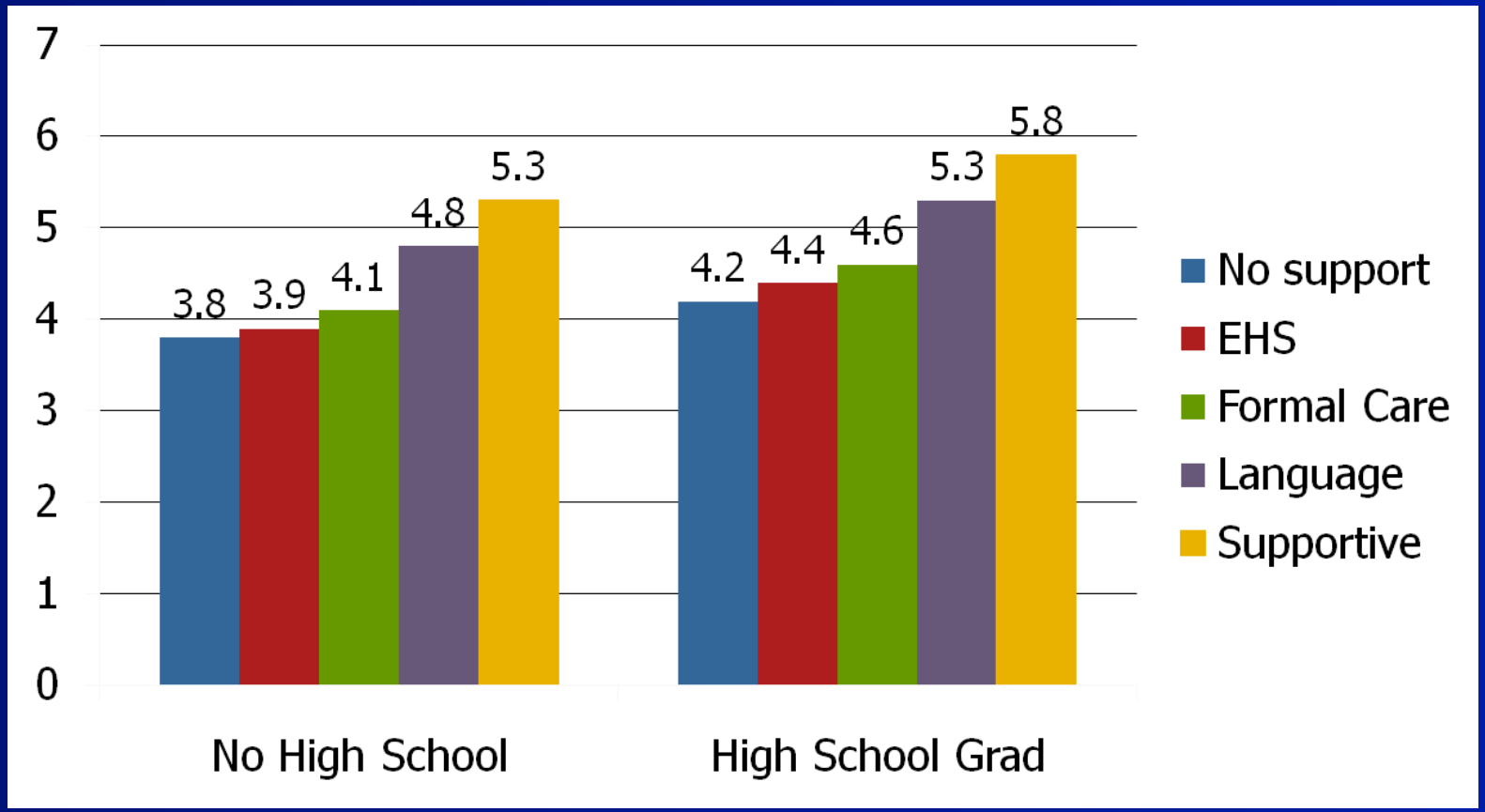
Age 5 – 7 possible

- Good or Better Health
- PPVT or TVIP $\geq$ 90
- Letter Word Recognition $\geq$ 90
- Math $\geq$ 90
- Westat Behavior Prob $\leq$ 4.0
- Positive Approaches to Learning $\geq$ 12
- Attention = 10

Stair Steps to Success at Age 3



Stair Steps to Success at Age 5



Implications for Programs

- Enroll eligible families into the EHS program
- Have a well implemented program
- Work hard to ensure full family participation
- Help parents obtain High School education
- Help parents increase child language stimulation at early ages
- Help parents become more sensitive and supportive
- Help children enroll in pre-k programs following EHS

Working on the EHS Study at UNL

UNL Studies:

- Structural Equation Modeling to study whether positive parenting can mediate the negative effects of depression and parenting stress on children's cognitive and social emotional at age 3 and 5- Xiaoyun Zhang
- Whether positive parenting mediates early parenting conflict attention at age 5- LinLin Lao
- The effects of father residency on aggressive behavior problems- Michelle Simpson
- Congruency between teacher and parent ratings of aggressive behavior Problems – Eunju Jung
- Congruency between parent and child report of sadness and internalizing When children are 10- Yinjing Shen
- Why children's language scores change from age 5 to Grade 5- Yanjie Long
- Whether early bookreading contributes 5th grade literacy- Megan Borer & Dawn Davis

For more information…

http://www.acf.hhs.gov/programs/core/ongoing_research/ehs/ehs_intro.html