WORKING IN HOMES

to Support the Development of Young Families

Katherine A. Tibbetts, PhD and Teresa Makuakane-Drechsel, EdD

April 2006

RESEARCH & EVALUATION REPORT

ESPEEDOMETER

How does this report relate to Kamehameha Schools' Education Strategic Plan (ESP)?

STRATEGIC PRIORITIES

- ☑ Optimize and Build (Prenatal–8)
- ☐ Sustain Momentum (Grades 4–16 & post-high)
- ☐ Innovate and Optimize (KS K–12 campuses)

Purpose of Our Study

This brief reviews the available literature on the impact of home visiting programs on the cognitive development of young children and identifies some general considerations for organizations considering adopting home visiting programs.

What We Learned

- Home visiting is a viable strategy for improving the cognitive development of young children, but expectations of program impact should be modest.
- Both the strength of program theory *and* fidelity in implementation are crucial to effectiveness. Ongoing investments in program monitoring and evaluation are needed to enhance and sustain effectiveness.
- Because home visiting programs cannot meet the needs of all families, we suggest that services to a community employ a number of different strategies for supporting families.

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KAMEHAMEHA SCHOOLS

Working in Homes to Support the Development of Young Children

Katherine A. Tibbetts, PhD and Teresa Makuakane-Drechsel, EdD

BACKGROUND

In 1977, Kamehameha Schools opened a home visiting program designed to support the cognitive development and school readiness of young children. This program was first known first as Kupulani. From 1977 through 1987, Kupulani employed three home visitors and operated in the Koʻolauloa community. In the 1987–88 program year, federal funding was used to expand the program to include most of the state, and the program name was eventually changed to Parent Educational Services (PES). The program remained in operation at Kamehameha Schools until 1996 when it was transitioned to ALU LIKE (along with the federal grant that funded it). In the 1995–96 program year, PES employed 33 home visitors and enrolled 759 families (a reduction from the peak operations in 1994–95 with 42 home visitors and 1,126 program participants).

Kamehameha Schools is presently exploring the feasibility of partnering with other agencies to support home visiting services with a child development focus as one means to accomplish Strategic Priority 1 in the Kamehameha Schools Education Strategic Plan (Kamehameha Schools, 2005).

This brief provides an overview of the theoretical basis underlying home visiting, general research findings, and implications for organizations considering adopting home visiting programs.

THEORETICAL BASIS

Home visiting is a *service delivery strategy* that goes back at least to the 1880s. Home visitations to families of young children have been used to help reduce child abuse, enhance child development, improve the life course of parents, ensure regular medical care, and reduce the incidence of Sudden Infant Death Syndrome (SIDS).

Home visiting programs designed for young families focus on the pivotal role of parents in shaping children's lives and are based on the belief that one of the best ways to reach families with young children is to bring services to them. Home visiting creates the potential for home visitors to experience the environments in which families live and use this more intimate knowledge to tailor services to meet the needs of individual families (Gomby, Culross, & Behrman, 1999).

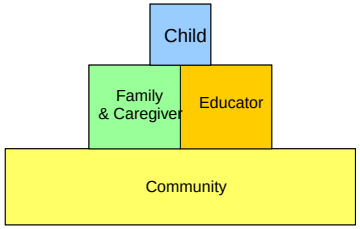
A visual model of the potential impacts of home visiting program on child development is provided in Figure 1.

RESEARCH BASIS

Some home visiting programs have proven to be effective in promoting age-appropriate development in children placed at risk for developmental delays. The strongest empirical evidence of their effectiveness comes from the randomized controlled experiment reported by Olds et al. (2004). Olds found that cognitive effects of home visiting persisted through at least six years of age. Effects were stronger for children whose parents were described as having lower levels of psychological resources. However, the sizes of the effects were small—differences in scores on the KABC and PPVT between the control and treatment groups were typically less than 0.2 standard deviations. Similar results were found in the meta-analysis of the effects of sixty home visiting programs conducted by Sweet and Appelbaum (2004), which included forty-one studies that assessed cognitive outcomes for children.

However, even the modest results reported above are not consistently found even in well-established programs. For example, an evaluation of one of the largest and most well-known home visiting programs, Parents as Teachers (PAT), found few and inconsistent effects on child development (Wagner, Spiker, Hernandez, Song, & Gerlach-Downie, 2001; Wagner, Spiker, & Linn, 2002).

Figure 1. How home visiting services support child development

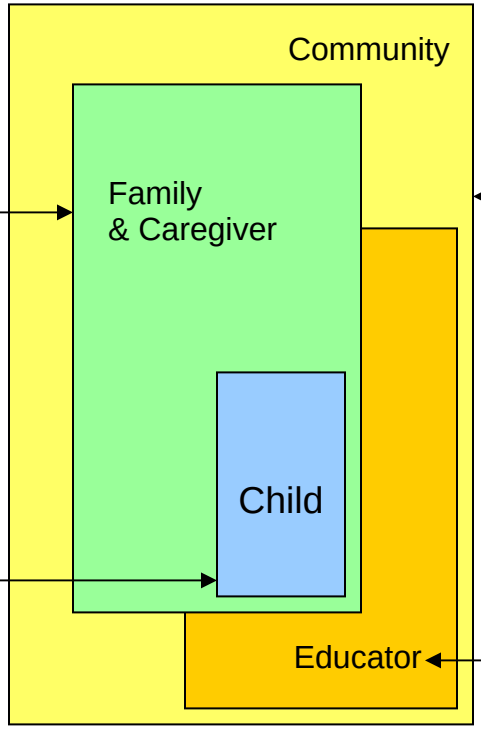


Family & Caregiver Outcomes

- Understand age-appropriate child development
- Interact with children ways that support their development
  - Emphasize early language development and literacy activities
- Develop strong self-efficacy as the parent or caregiver
- Provide cognitively enriched and safe home environment
- Actively participate in child's care and education

Child Outcomes

- Age-appropriate development
  - Language and literacy, cognitive, socio-emotional, and motor
- Receive recommended regimen of health care
  - Well-baby check-ups and Immunizations
  - Special services as needed
- Cognitively and emotionally ready for transition to out-of-home educational programs, e.g., preschool



Program Features

- Personal visits (at-least monthly, preferably bi-weekly)
- Developmental screening
- Group activities
- Resource network

Community Roles

- Understand the developmental needs of young children and their families
- Advocate for young children and their families
- Provide accessible health and educational services and activities

Educator Roles

- Build rapport with families
- Educate parents and caregivers about age-appropriate development, behaviors that foster development, and safety (direct instruction and modeling)
- Monitor child development
- Summarize child's developmental progress for families and identify next milestones and activities to support their achievement
- Provide referral and liaison with service providers as needed
- Promote connections between participating families
- Promote community awareness

Educator Characteristics

- Cultural proficiency and interpersonal skills
- Professional Development and Certification

In summarizing the results of the evaluations of six well-researched home visiting programs (including Hawai'i's Healthy Start), Gomby, Culross, and Behrman draw the following conclusions:

> "Results are mixed and, where positive, often modest in magnitude. Studies have revealed some benefits in parenting practices, attitudes, and knowledge, but the benefits for children in the areas of health, development, and abuse and neglect rates that are supposed to derive from these changes have been more elusive. Only one program model revealed marked benefits in maternal life course. When benefits were achieved in any area, they were often concentrated among particular subgroups of families, but there was little consistency in these subgroups across program models or, in some cases, across sites that implemented the same program model, making it difficult to predict who will benefit most in the future." (Gomby et al., 1999, p. 10)

Even the well-design home visiting programs tend to share a common set of implementation challenges.

- Programs struggle with family engagement—to enroll target families, maintain the desired frequency of visits, reduce attrition, and sustain changes in parent behaviors between visits.

- Programs also struggle with program delivery and staffing. Program effectiveness is limited when the program is not delivered as designed or the home visitors are not able to forge strong relationships with parents and caregivers. Factors related to program delivery include maintaining fidelity of the delivered program to the program model and maintaining a staff of well-trained home visitors capable of serving families facing multiple, complex issues (Gomby et al., 1999; Hebbeler & Gerlach-Downie, 2002; McGuigan, Katzev, & Pratt, 2003).

These findings are consistent with the evaluations of the Parent Education Services program at Kamehameha Schools (ALU LIKE, 2005; Belknap, 1996; Kamehameha Schools, Early Education Division Evaluation Department, 1995), a recent evaluation of Hawai'i's Healthy Start program (Duggan et al., 2004), and a recent synopsis of current research (Daro, 2006).

IMPLICATIONS FOR ORGANIZATIONS CONSIDERING HOME VISITING AS A SERVICE DELIVERY STRATEGY

Home visiting strategies can contribute to cognitive development of young children. When well implemented, home visiting has been shown to be an effective means for the provision of parent and caregiver training about child development and parenting (age-appropriate and culture-based); increasing parent/caregiver and child interactions; enhancing school readiness; linking services to support child needs; and fostering the development of parents' skills to help develop reading readiness and emergent literacy.

Our review of the literature suggests home visiting programs are most likely to be effective when designed and implemented with the following observations in mind.

- **Home visiting theory remains viable, but expectations of program impact should be modest.** Home visiting programs seek to alter the behavior of individuals as a way of addressing large societal problems, relying on perhaps twenty to forty hours of contact over a few years and they struggle with problems of implementation along the way. Based on existing research, expectations of cognitive gains should be modest, roughly the equivalent of 8 percentile points on the Peabody Picture Vocabulary Test.
- **The strength of the program theory *and* implementation are both crucial.** Increased social support alone will not improve child development outcomes; a strong program theory and tightly aligned curriculum and measurement system are critical to success.
- **Multiple program delivery models are needed.** Because home visiting programs cannot serve the needs of all families, other service strategies should be developed and supported including parent-focused services delivered in other ways.
- **Home visiting programs *may* be most effective with families with low social capital.** The literature suggests (but is not conclusive) that families with lower social capital benefit most from home visiting. This suggests a benefit from targeting young, less educated, lower-income families.

- **Ongoing investment in program monitoring and evaluation is needed to enhance program effectiveness.** As this brief review of the research literature suggests, much remains to be learned about the effectiveness of home visiting programs. Well-designed and utilized program monitoring can help assure stakeholders that the program theory is working and that program delivery is consistent with the program model and has the added benefit of generating new knowledge about effective strategies.

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~ Additional Research ~

Kamehameha Schools Meeting

Home Visiting: What Do We Know from Prevention Science and Experience?

Elizabeth McFarlane, MPH
Anne Duggan, ScD

Today's Talk

- **What We Know from**
  - **Prevention Science**
  - **HSP Research and Experience**
  - **HFA Research and Experience**
- **Implications for Where to Go from Here**

Prevention Science

- **Early Childhood sets the life course trajectory**
- **Crucial Domains**
  - **Self-regulation: controlling one's emotions, behaviors, attention**
  - **Language, reasoning, problem solving**
  - **Social development: capacity to trust, love and resolve conflict**
- **Parenting mediates most of the impact of poverty**
- **Establish Efficacy, then Effectiveness**

What We Know --- #1

Home visiting can be effective in addressing a range of outcomes, but effects tend to be small.

Meta-Analytic Study of HV Impact

- 60 studies in the peer-reviewed literature
- US home visiting programs, 1965-2002
- End of treatment measures for whole groups

- Parent and child outcomes in 10 areas

Sweet and Applebaum, Child Development 75(5):1435-1456, Sept/Oct 2004

Meta-Analysis Results: Effect Sizes by Type of Outcome

Child Cognitive Development (41 studies)	.18***
Child Socio-emotional Development (24)	.10***
CAN Prevention (7)	.32
CAN – Potential Abuse (13)	.24***
Parenting Stress (4)	.21
Child Rearing Behavior (37)	.14***
Child Rearing Attitudes (15)	.10**
Maternal Life Course – Education (5)	.13**
Maternal Life Course – Employment (7)	.02
Maternal Life Course – Public Assistance (3)	-.04

Effect Size Key

Small = .20

Medium = .50

Large = .80

- **HV *can* be effective**
- **Effects are small.**

What We Know --- #2

Basic program attributes do not clearly explain variability in program impact.

Basic Program Features – Association with Effectiveness

- Type of Staff – inconclusive
- Length – inconclusive
- Primary Goal – mixed results
  - If self-help, self-sufficiency, social support: did poorer in promoting child development and preventing potential CAN
  - If health care: did better on child development
  - If CAN prevention: did better in preventing potential CAN

What We Know --- #3

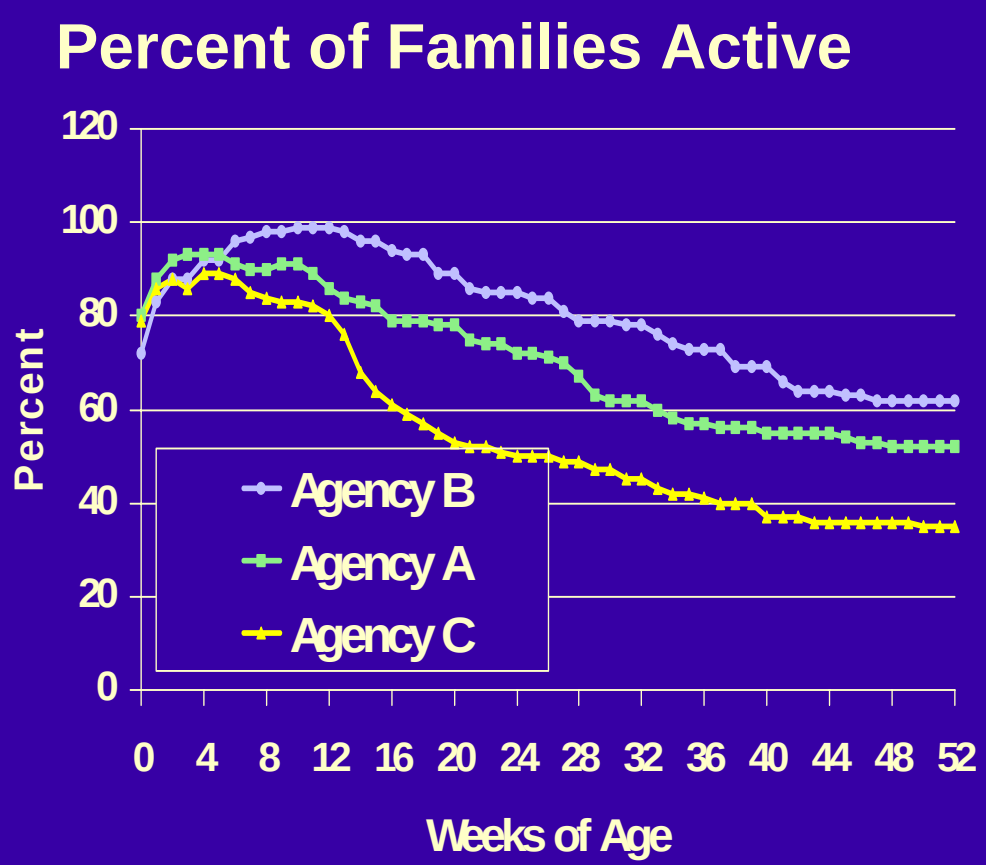
Few studies have examined other features that might explain variability in impact among different HV program models and across sites using the ‘same’ model.

Service quality is essential.

The HSP study has taken a closer look at this than other studies.

In home visiting as in health care, there is considerable variation among providers.

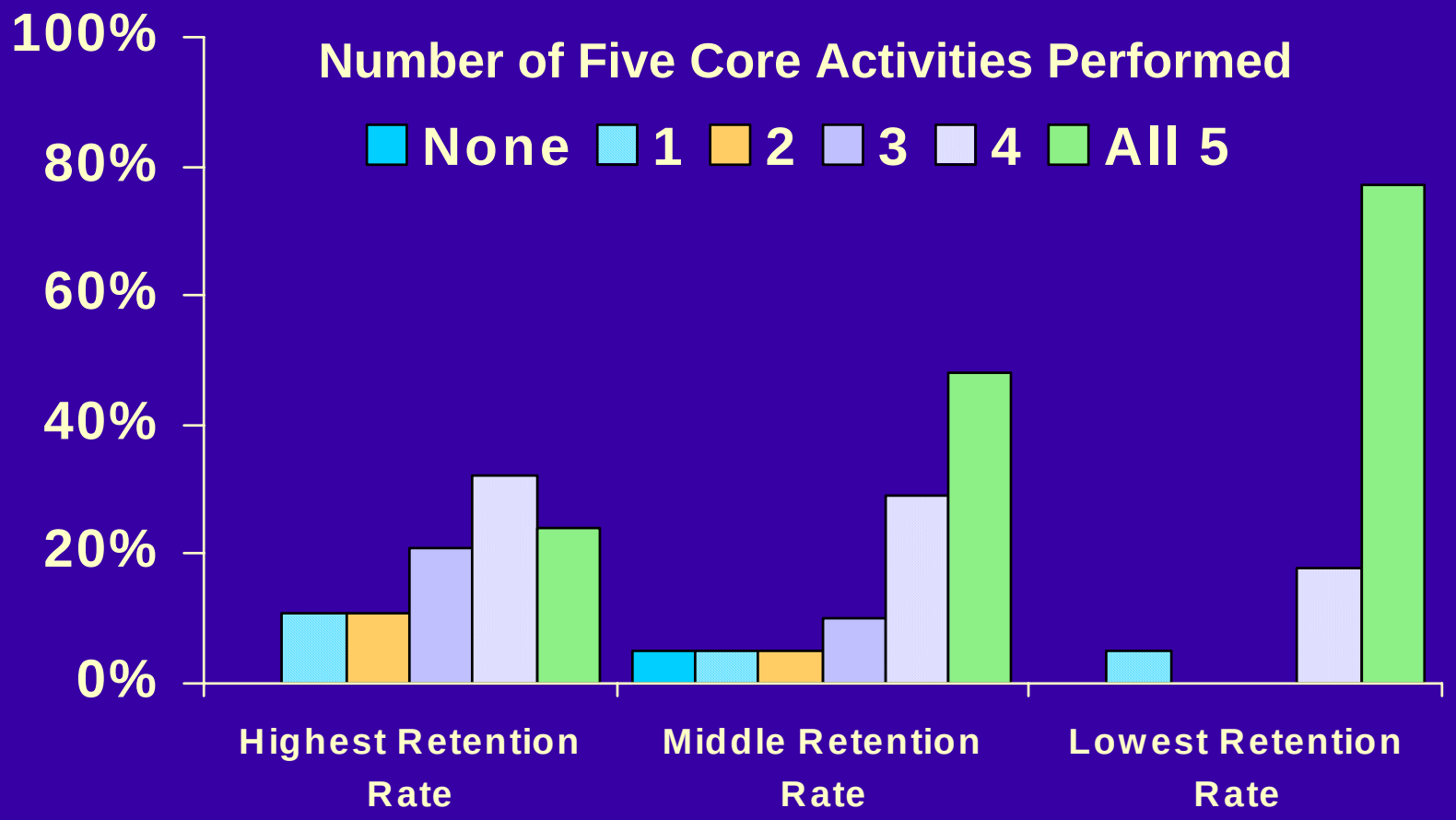
In the mid-late 1990s, HSP Programs Varied... in Family Retention and Home Visit Rates



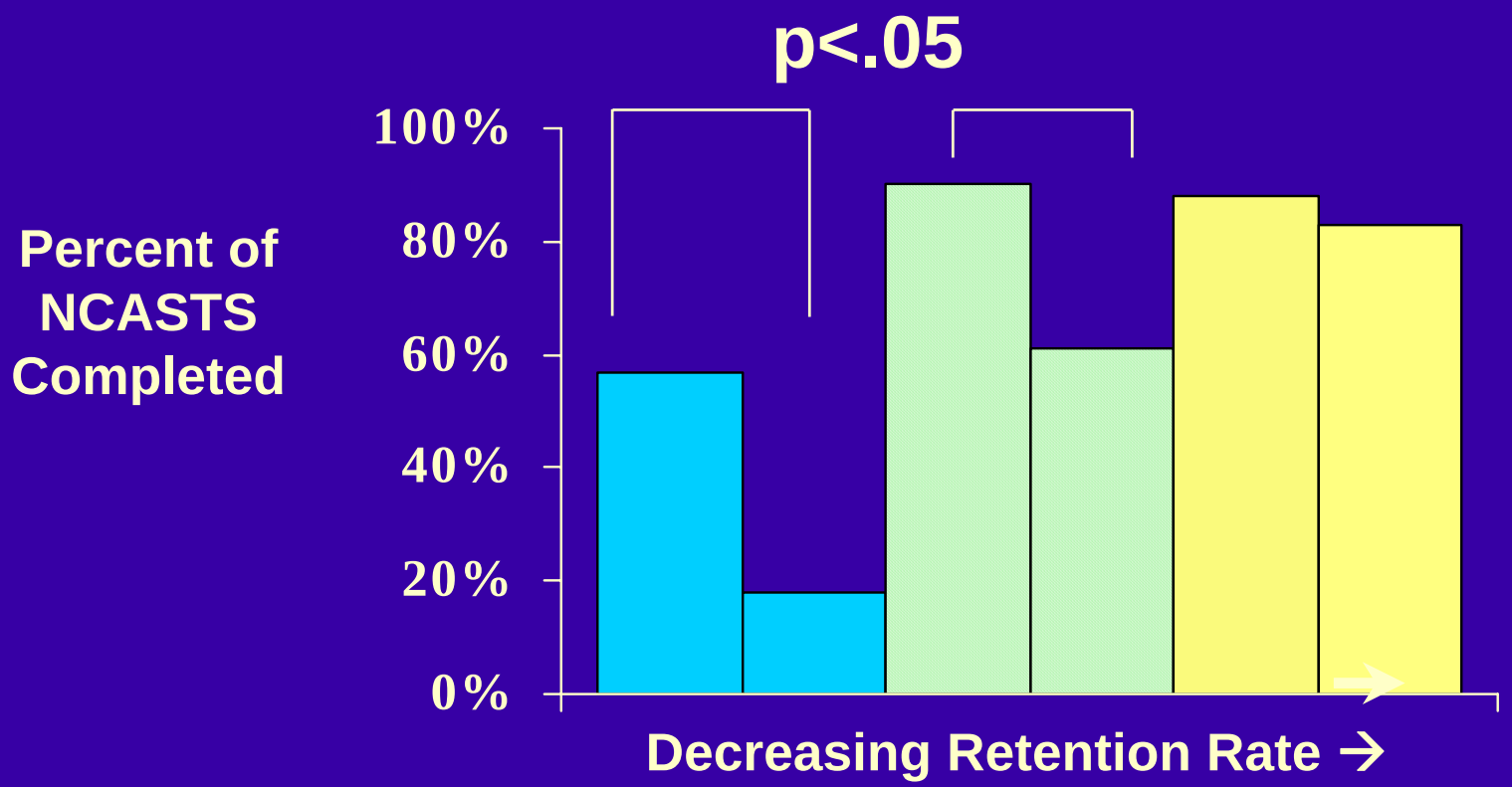
Mean Number of Visits

Agency	Active Families	All Families
B	22	16
A	19	11
C	28	12
p	<.01	<.01

As Retention Rates Fell ... Provision of Core Services Increased



Completion of core services varied by factors other than retention rate.



- Completion of the 24-month NCAST

Additional Sources of Variability in Effect Size

- Variable specification of the ‘model’
  - Broad statement of purpose vs. protocols
  - Link between goals and outcome measures
  - Clear logic models
- Variable quality of the implementation system
  - “Internal noise” e.g., some staff acting more ‘friendly’, others acting more ‘professional’
  - Staff differences in interpreting visit goals
  - Staff differences in skill and service quality

What We Know --- Summary #3

Basic program attributes do not clearly explain variability in program impact.

- Research is needed to test interventions to reduce variability, increase quality, and ascertain resulting changes in impact.

What We Know --- #4

Discrete interventions can improve the effectiveness of basic HVmodels.

- Research is needed to identify candidate interventions and incorporate them into HV practices.

Enhanced HSP Model

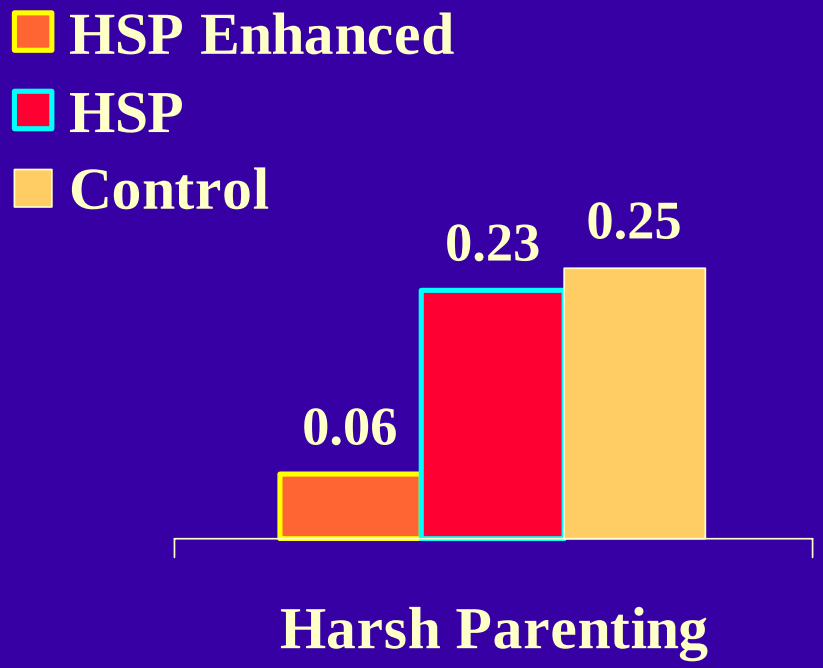
Bugental et al., J Fam Psychology 16(3):243-258, 2002

- **Hypothesis:**

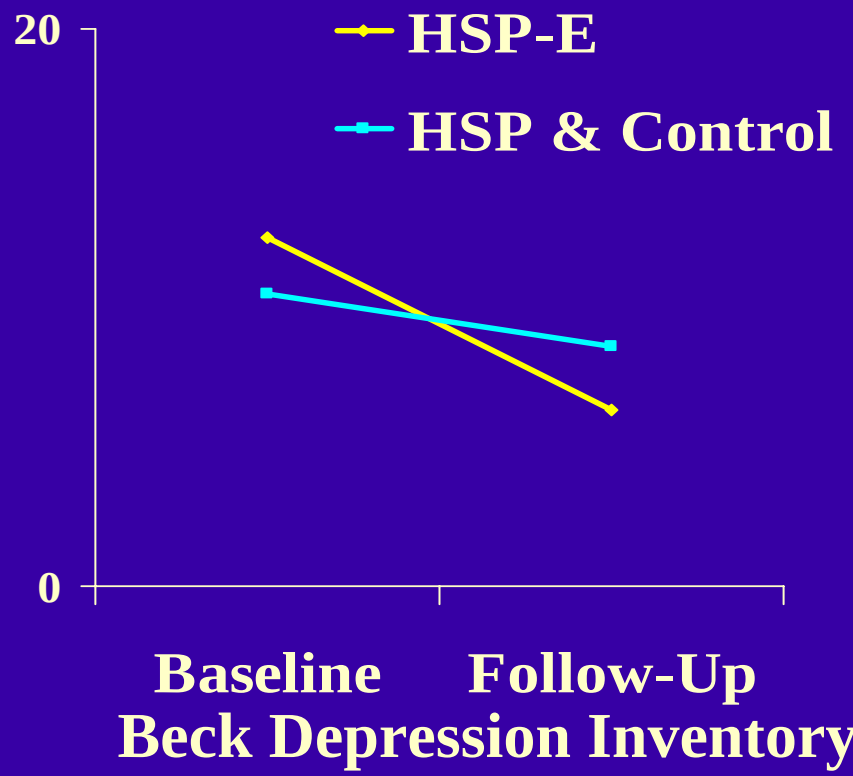
  A cognitive appraisal component to reduce attribution bias and develop problem solving skills will reduce harsh parenting.

- **Methods**
  - **Randomized Trial**
  - **Families at moderate risk for CAN per the FSC**
  - **Three conditions: Control, Unenhanced HSP, Enhanced HSP**
  - **Outcome: harsh parenting**
  - **Moderator -- child risk**
  - **Mediator – maternal depressive symptoms**

HSP-Enhanced Reduced Harsh Parenting and Maternal Depressive Symptoms



HSP-E < HSP/Control, p<.05



HSP-E < HSP/Control, p<.05

What We Know --- #5

But “added on” discrete interventions, even if theory- and evidence-based, must be tested to establish efficacy and effectiveness.

- HSP should invest in research to test the impact of such interventions.

Enhanced PCIT Model -- Methods

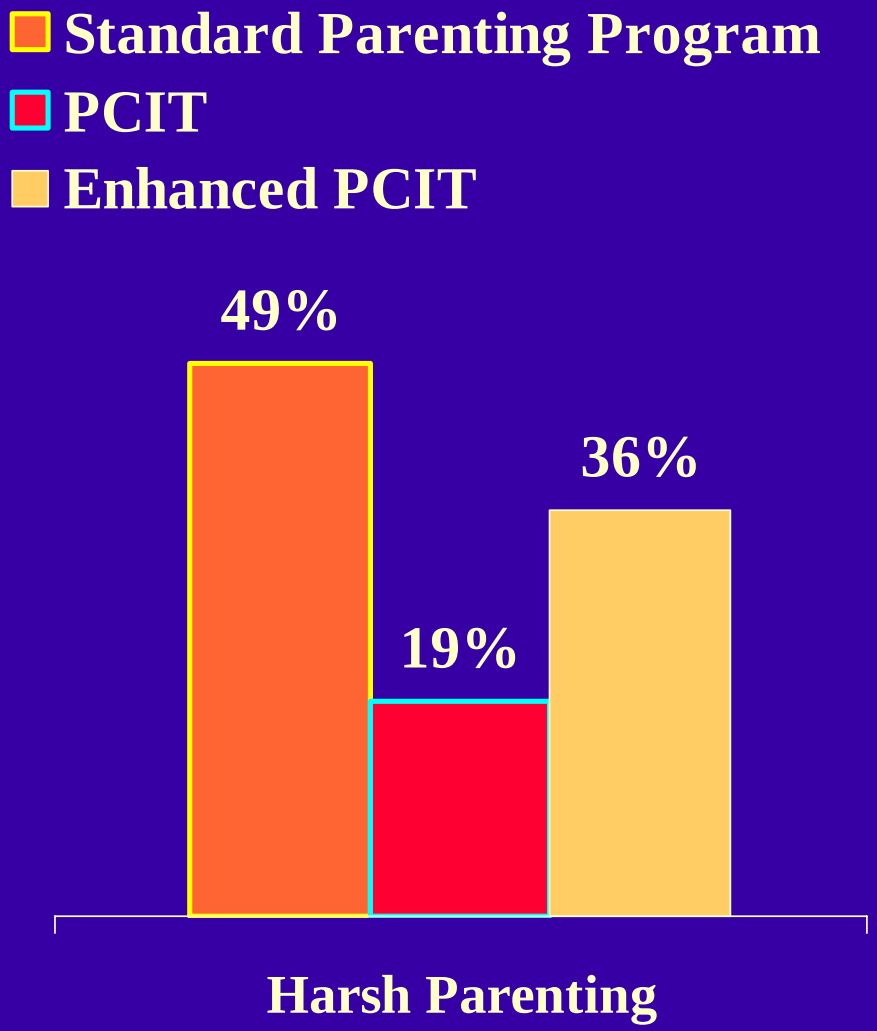
Chaffin et al., 2004

- **Hypothesis:**

Services to address disruptions to effective parenting will increase the effectiveness of the PCIT behavioral parent training program in preventing recurrence of physical child abuse.

- **Randomized Trial**
- **Participants: Parent/child dyads entering CWS for physical abuse**
- **3 Conditions: Standard parent program, PCIT, Enhanced PCIT**
- **Primary Outcome: Re-reports for physical abuse**

Enhanced PCIT -- Results



Interpretation of Results

- Additional services might have diluted interest in or attainment of behavioral parenting goals.
- E-PCIT parents might have inadvertently been encouraged to attribute parent-child problems to something other than parenting behavior.
- Quality and content of enhanced services were not controlled and might have contributed to results.

What We Know from HSP RCT

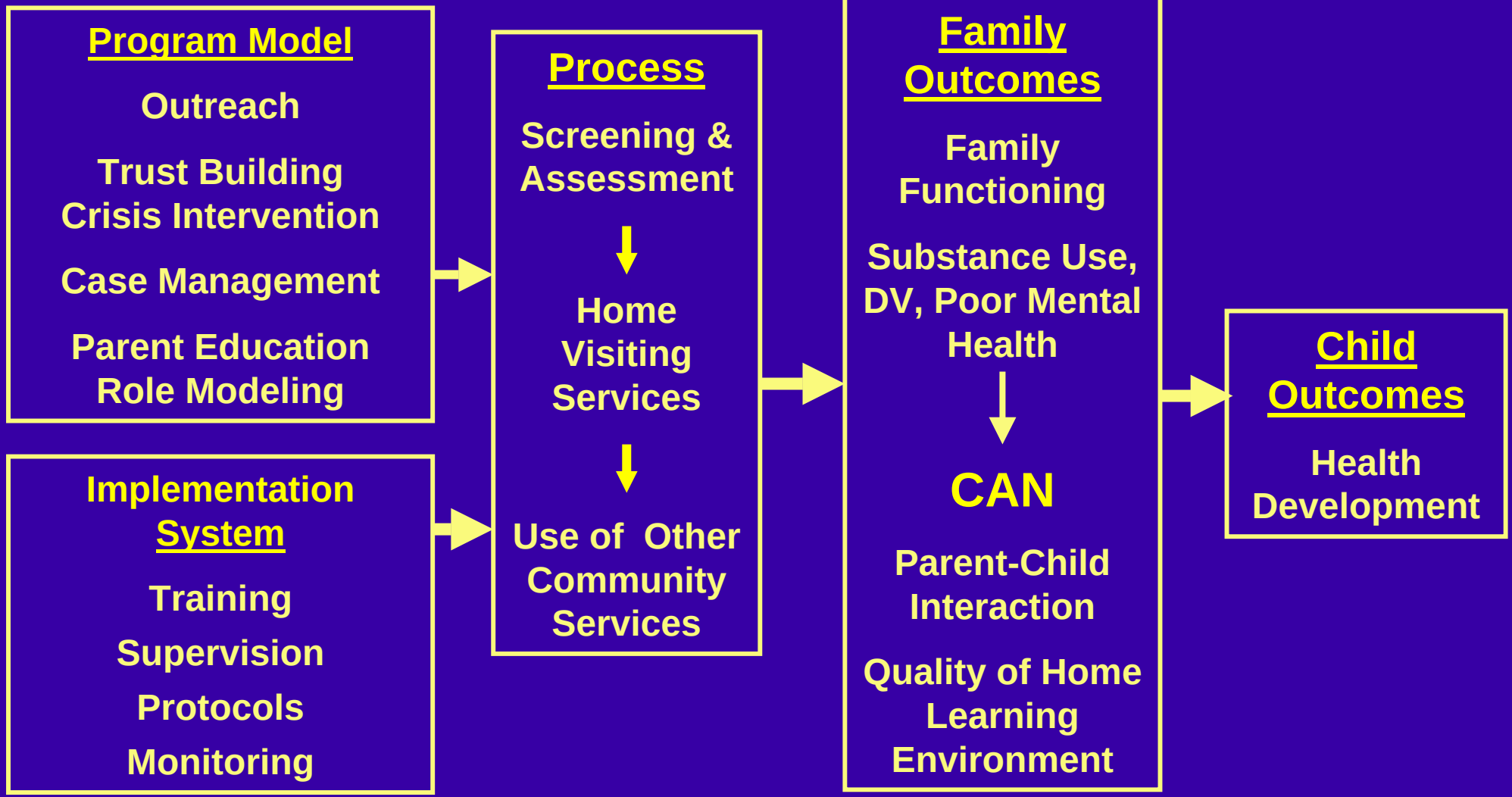
The first RCT of HSP helped elucidate the mechanisms for success and failure to achieve desired outcomes.

Approach to HSP Research

"Every system is perfectly designed to achieve exactly the results it gets."

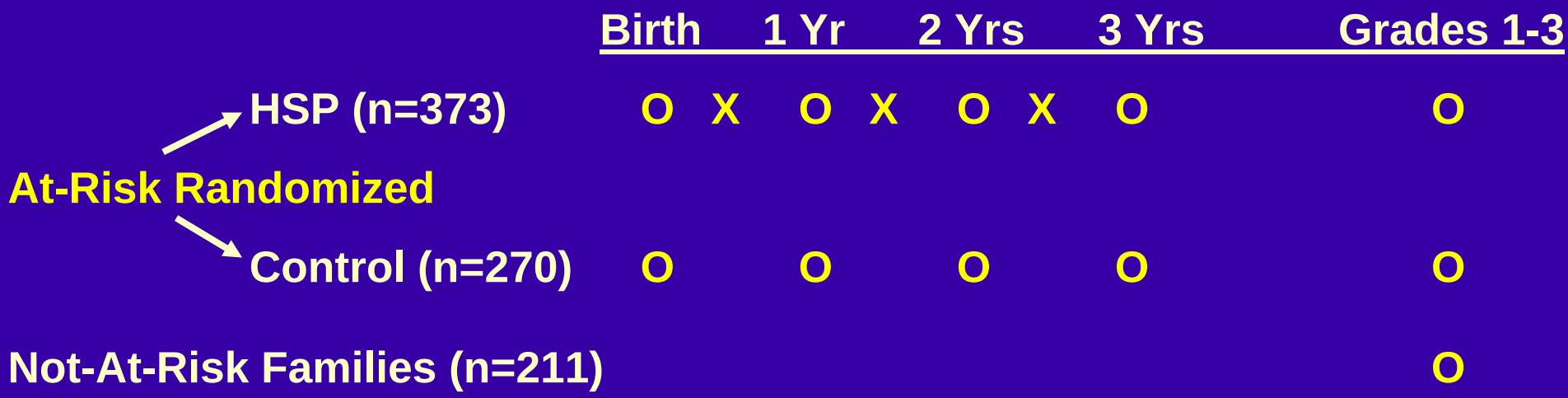
Donald M Berwick, M.D.
Institute for Healthcare Improvement

Conceptual Framework



Study Methods

- **Randomized trial of the Healthy Start in 6 communities**
- **Data sources: parent interviews; child assessments; home and school observation; record review**



What We Know --- #6

The malleable risks for which families are targeted are, in fact, strongly associated with CAN and with other measures of the quality of parenting behavior.

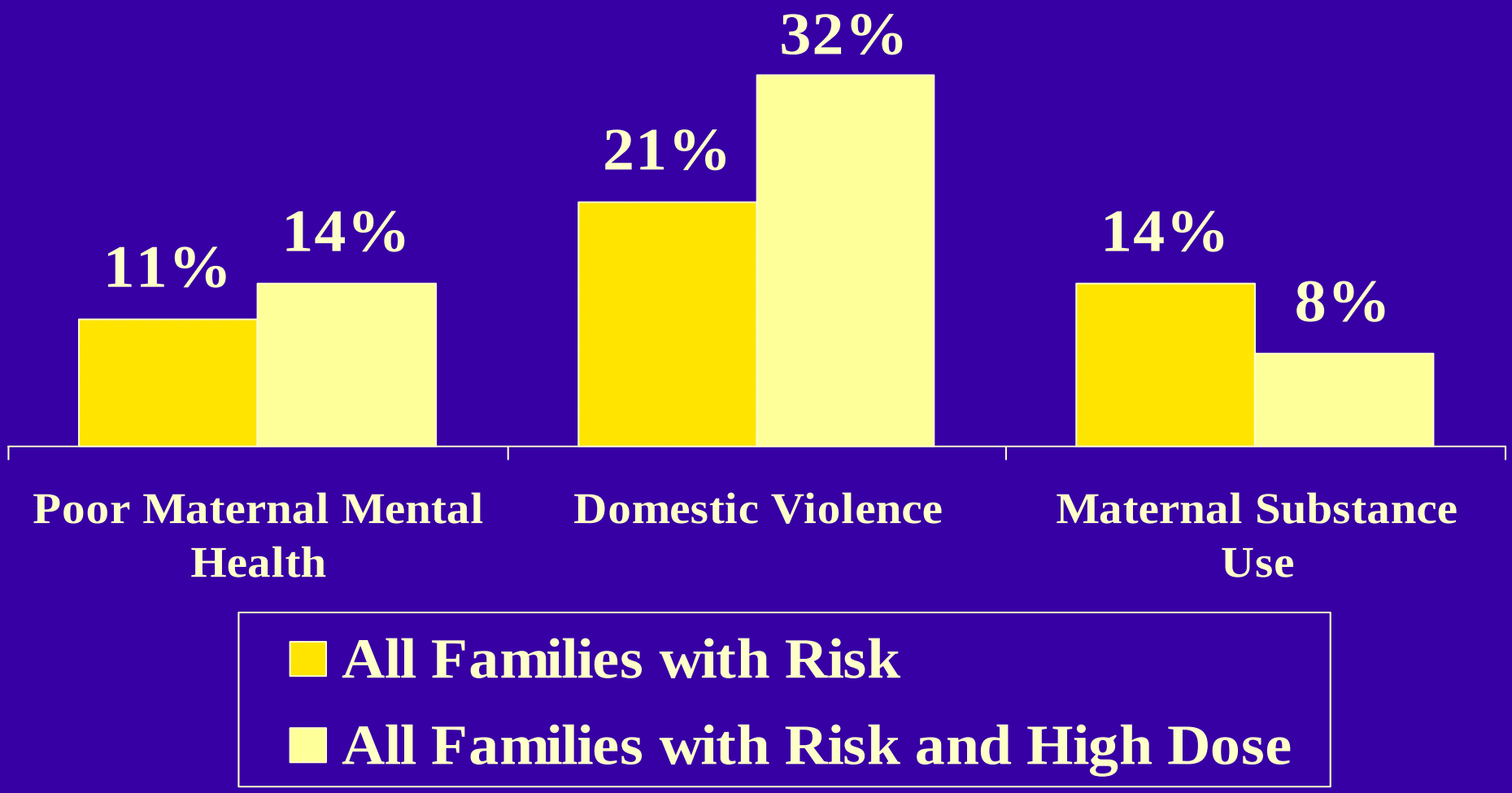
- Risk reduction should be an explicit outcome measure.

What We Know --- Summary #7

Without adequate training, protocols and supervision, HSP staff failed to address the risks for which parents had been targeted.

- Recent and future changes to HSP training, protocols and supervision should be tested for their impact on service quality and family outcomes.

HV Risk Recognition Rates Were Low… even with a High Dose of Service, Birth - 1 Year



Home Visitors' Perceived Competence

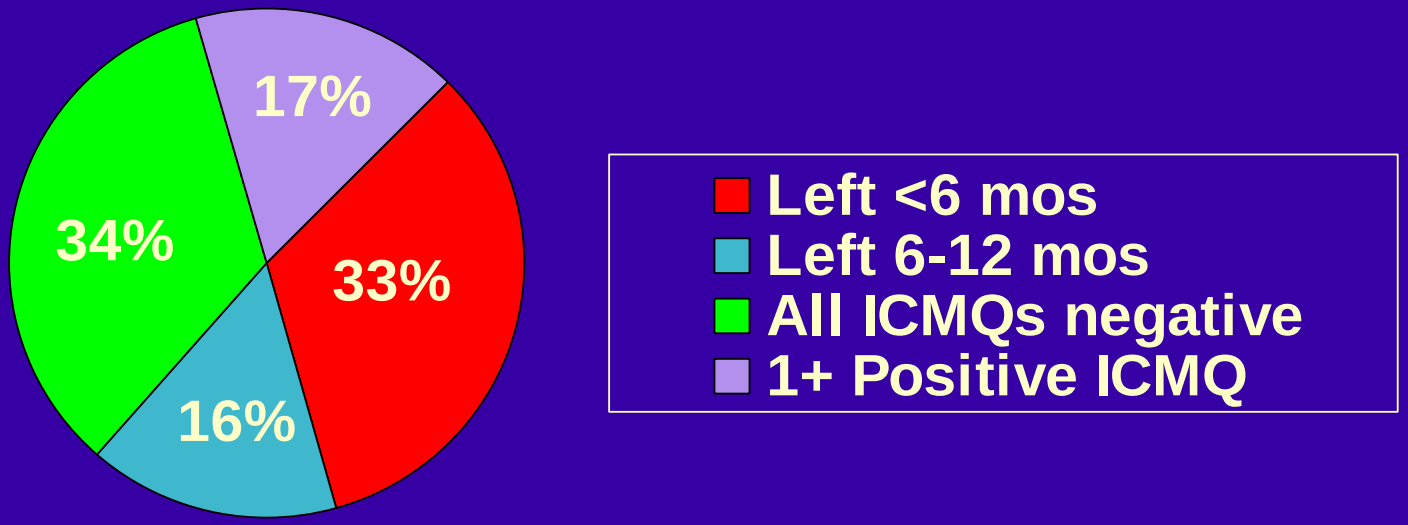
Highest	Gaining mothers' trust
	Promoting positive parenting
	Promoting mothers' personal growth
	Promoting natural support networks
Lowest	Addressing risks for child abuse

What We Know --- #8

Without adequate training, protocols and supervision, HSP staff failed to identify children at developmental delay.

New and Revised training, protocols and type of supervision need to be tested for efficacy

Children Assessed as Developmentally Delayed at Age 3 Years: HSP Screening



- Half the children had left HSP by 12 months.
- Of those with one or more ICMQ, only a third had any positive screens.

What We Know --- #9

The quality of the home environment and of parent-child interaction predict children's success in transitioning to school.

Parenting tracks from early childhood into grade school.

- The program needs to promote positive parenting as much as it seeks to prevent CAN.

Parenting Relates Strongly to Child Development

- For each 1 point increase in the HOME Scales:
  - 0.9 point increase in the Preschool Language Scale
  - 0.3 point decrease in CBCL Scales

- For each 1 point increase in the NCAST Teaching Scale:
  - 0.7 point increase in the Stanford-Binet
  - 0.3 point decrease in the CBCL Scales

What We Know --- #10

HSP retention rates have not changed much overall since the original study.

HSP retention rates are not too different from those of other HFA programs.

- Retention goals need to be realistic.
- Consider '2nd chances' for enrollment.

Retention Rates at 1 and 2 Years

	1 Yr	2 Yrs
HSP – 1st Study	49%	32%
HSP -- Now	50%	na
HFA - Alaska	55%	29%
HFA – Daro & McCurdy		32%
Oregon Healthy Start	55%	
HFA – Davenport et al.	58-65%	
Olds – Denver paraprofessionals		52%

What We Know --- #11

Some family attributes are predictive of which families will enroll and which ones will remain in the program.

- Develop and test interventions to improve retention of specific subgroups likely to drop out and also most likely to have poor outcomes.

Most Families Were Willing to Enroll ---
Willingness Varied by Family Characteristics

- 82% of eligible families willing to enroll
- Higher enrollment by
  - **Families with higher risk scores**
  - **Families with infants at biologic risk**
  - **Young, less well educated mothers**

Program Continuation ... Varied by Family Characteristics

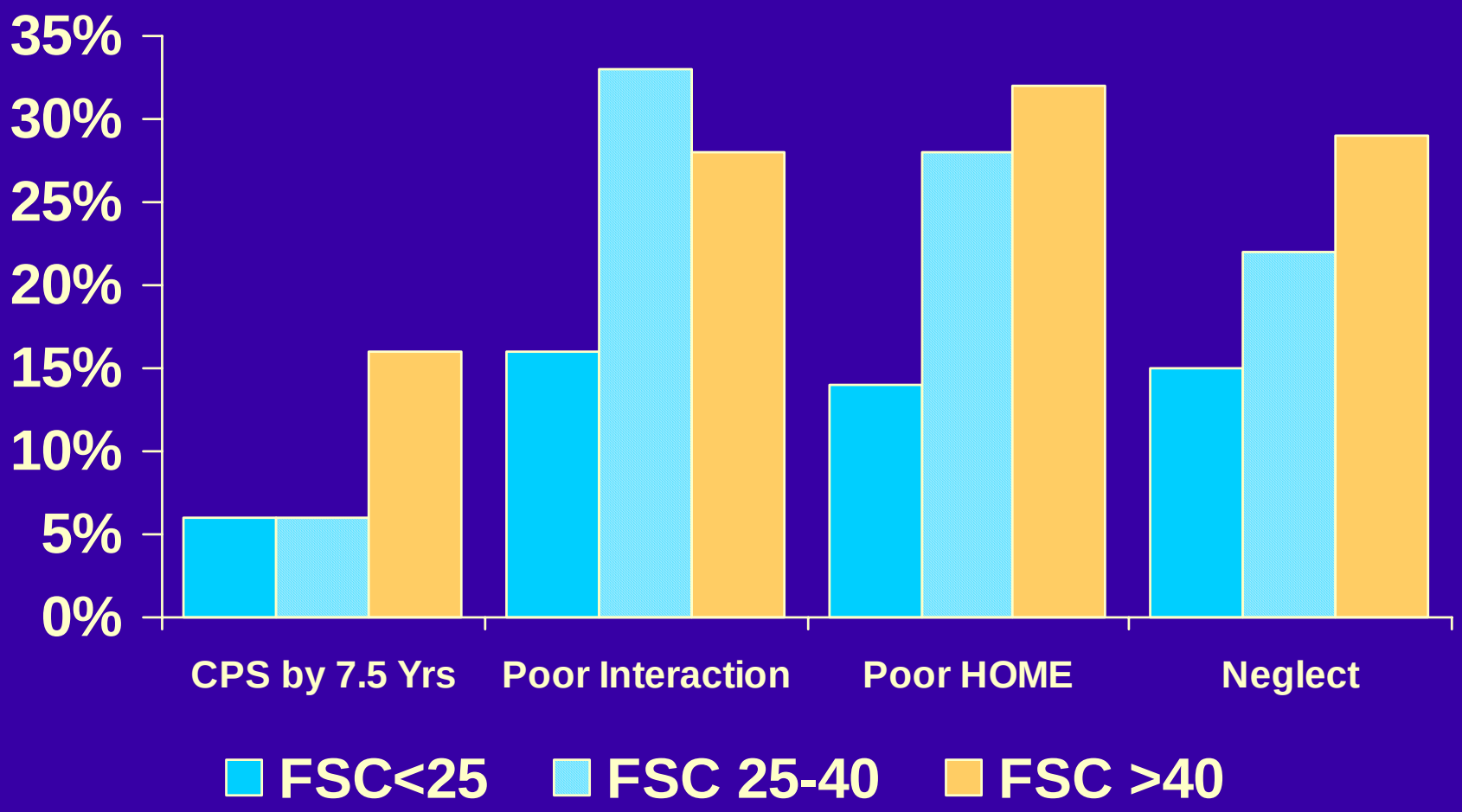
- More likely if infant at biologic risk
- Related to mother's level of risk
  - Less likely as overall risk increased
  - Much less likely if mother unilaterally violent
  - More likely if substance abuse
- More likely if father at extreme high risk, substance using, violent

What We Know --- #12

Even families with ‘moderate’ FSC scores have poorer outcomes than those with scores <25.

- Maintain current eligibility criteria.
- Consider different levels of service.

Outcomes by FSC Score



Acknowledgements

The Leadership and Staff of the HSP Network

•Commitment to rigorous, collaborative research
•Willingness to share results

The Alternative

–“He uses statistics as a drunken man uses lampposts --- for support rather than illumination.”

Andrew Lang (1844-1912)

Implications for Policy and Practice

O'Riordan & Carr Review of CAN Preventive Interventions

- Identify families via prenatal screening, if possible
- Serve families until assessment shows risks have been substantially reduced
- Consider coupling with primary prevention
- Evaluate long- as well as short terms impacts, a range of outcomes
- Target both parents
- Evaluate manualized interventions with fidelity checks
- Mediators: Elucidate the mechanisms for effectiveness
- Moderators: Determine what works best for which families

Implications

Sweet and Applebaum Meta-Analysis

- Need a more complete conceptualization of program design and implementation

  Need more detailed measurement of service delivery

  "This may mean designing programs more specifically with evaluation in mind. From very early on in a program's inception, issues of *who* is to be most affected, *how* such families will be affected, and how this effect is to be *measured* should be addressed, resolved, and clearly reported."

Which Parenting Curricula? Which Risk Reduction Protocols?

- Need to select efficacious models
- Need to tie training, supervision and outcome measures directly to selected protocols.
- Need to test, test, test.