# Act Early Forum Webinar Series



Learn the Signs. Act Early.

# Creative Ways to Reach Hard to Reach Populations

*Part 1 of 2: Addressing Disparities in "Learn the Signs. Act Early.":*
*Reaching Families at Risk for Child Maltreatment*

## July 23, 2013

# Webinar Overview

- ## Webinar Recording
  - Visit [www.aucd.org/webinars](www.aucd.org/webinars)

- ## Q & A
  - Please submit your questions throughout the webinar via the "question box" on your webinar dashboard. Questions will be answered following the presentation.

- ## Survey
  - Please complete the short survey at the end of the webinar!

# Introructions



**Catherine Rice**, PhD, Epidemiologist, Developmental Psychologist, National Center on Birth Defects and Developmental Disabilities/Centers for Disease Control and Prevention

# Introductions

**Daniel Crimmins**, PhD, Director, University Center for Excellence in Developmental Disabilities, Georgia State University, Professor, Institute of Public Health, Georgia State University

**Emily Cook Graybill**, PhD, NCSP, Clinical Assistant Professor, Center for Leadership in Disability, Institute of Public Health, Georgia State University

**Erin Vinoski**, MPH, CHES, Research Associate, Center for Leadership in Disability, Institute of Public Health, Georgia State University

**Bonnie McBride**, PhD, BCBA-D, Act Early Ambassador, Associate Professor, Department of Developmental and Behavioral Pediatrics, University of Oklahoma Health Sciences Center

**AUCD**
ASSOCIATION OF UNIVERSITY CENTERS ON DISABILITIES
RESEARCH, EDUCATION, SERVICE

Learn the Signs.
Act Early.

# Addressing disparities in Learn the Signs. Act Early.

## Reaching Underserved Families

Principal Investigator: Daniel Crimmins, PhD
Co-investigators: Emily Graybill, PhD, and Shannon Self-Brown, PhD
Research Associate: Erin Vinoski, MPH

# Background

- Disparities persist for children from underserved backgrounds in follow-through on screening, age of diagnosis, and types and intensity of services received

- CDC's **Learn the signs. Act early.** (*LTS/AE*) campaign is committed to increasing screening and early identification of developmental delays for **all** children

# Project Goals

- Immediate goal: Assess the impact of ***LTS/AE Milestone Moments*** booklet delivered by home visitors (HVs) to underserved families

- Long-term goal: Demonstrate an effective approach to increasing developmental awareness of underserved families and follow-up of their children with developmental delays

# Project Phases

- Pre-phase 1:Integrate LTS/AE materials into the SafeCare® home visitation program for use with families at risk for child maltreatment

- Phase 1: Assess potential adaptations of LTS/AE materials to support low-literacy families

- Phase 2: Conduct a randomized controlled trial (RCT) on the context in which *Milestone Moments* is provided to families

- Phase 3: Conduct interviews with families who received the *Milestone Moments* booklet

# *Milestone Moments*

- Organization of the *Milestone Moments* booklet
  - Ages – 2 months to 5 years
  - Developmental Domains
    - Social/Emotional
    - Language/Communication
    - Cognitive
    - Movement/Physical Development
  - Act Early signs
  - "How you can help your child's development"
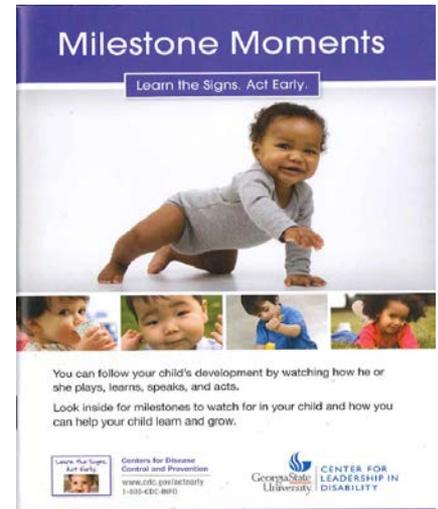
# SafeCare®

- SafeCare is an evidence-based, training curriculum for parents reported or at-risk for child maltreatment

- SafeCare home visitors provide in-home training sessions for parents of children ages 0-5 in weekly visits of 1-2 hours over 18-20 weeks

- SafeCare modules focus on health, home safety, parent-child interaction, and problem solving

# LTS/AE and SafeCare

- LTS/AE content was integrated into the *Parent-Child Interaction* module several years ago
- It fits with many aspects of the program, such as the use of structured checklists, coaching on talking to medical professionals, and teaching problem-solving skills
- Concern about *Milestone Moments* literacy level raised by SafeCare trainers/home visitors
- Single-subject pilot project examined *Milestone Moments* text vs. line drawings on knowledge of 24-month milestones by two mothers (Guastaferro, et al., 2013)

# Phase 1: Teaching Young Mothers

- Research question: *"Can a combination of line-art drawings and discussion increase a mother's recognition of developmental milestones?"*
- Multiple-probe, single case design
- Two mothers (ages 20 with a 25-month old daughter, and 17 with a 29-moth old daughter) living in a residential program to promote self-sufficiency with their children agreed to participate
- Weekly sessions that focused on mothers' awareness of child development
  - Baseline – mothers had access to *Milestone Moments* booklet
  - Intervention – mothers had access to picture cards with the *Milestone Moments* booklet
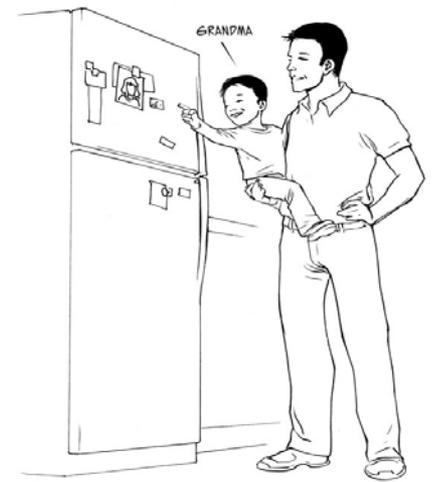
**Copies Others**

**Points to Ear**

**Knows Familiar People**

**Finds Things**

**Follows Instructions**

**Stands on Tip-Toes**

EAR

GRANDMA

PICK UP YOUR SHOES AND PUT THEM IN THE CLOSET
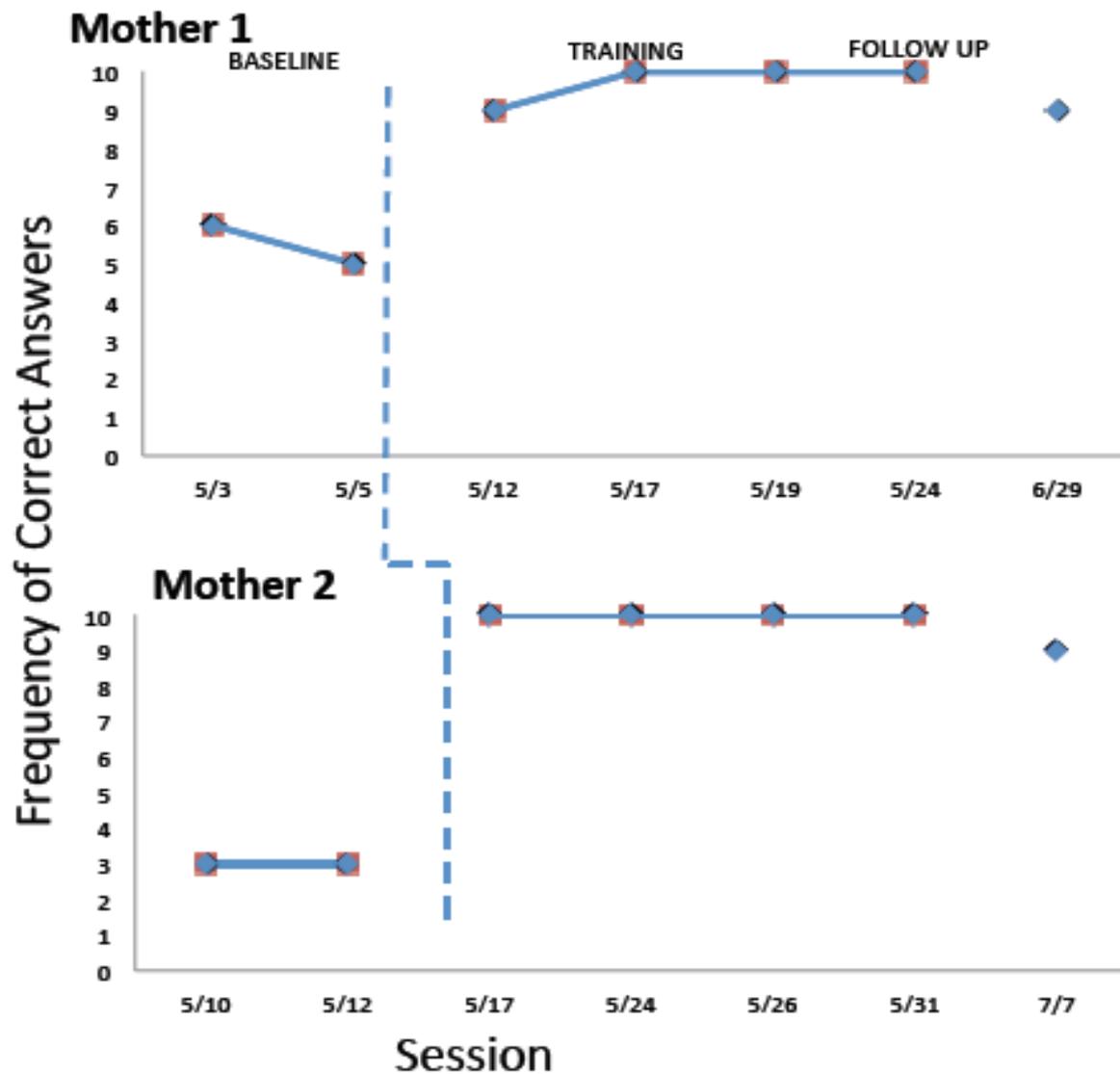
# Phase 2: Conducting the RCT

- Case study of state political environments and shifting policy priorities

- Series of false starts

  #1 – Georgia Division of Family and Children Services

  #2 – State of Oklahoma

  #3 – State of Washington

  #4 – Georgia Department of Public Health

  #5 – Children's Healthcare of Atlanta Pediatric Clinic

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# Getting Started Locally – Finally!

- Sheltering Arms (SA) Early Education & Family Centers
  - 1) high quality, affordable child care and early education, 2) comprehensive family supports, 3) professional development, and 4) community building partnerships
  - 3,600 children and their families - 16 neighborhood centers
  - Government childcare subsidies and income-based scholarships provided to nearly 90% of SA families
  - Sheltering Arms Georgia Training Institute - trains more than 6,000 early childhood and family support professionals each year
- For this project, the study team recruited participants from seven SA centers across metro-Atlanta.

# Design of the RCT

- This study was a single phase, concurrent mixed methods, randomized controlled trial design

- Quantitative data collection began in Summer 2012 and final follow-up is still in progress

- Qualitative data collection began spring 2013 and is in progress

# Groups

Participants randomly assigned to one of four groups:

(1) Control group (who received reading materials on parenting)

(2) Day care setting group (who received the *Milestone Moments* booklet in the parent resource room of the day care)

(3) Brief home visit group (who received the *Milestone Moments* booklet during a one-time home visit)

(4) SafeCare® group (who received the *Milestone Moments* during a six-session SafeCare® parent-child interaction module)

# Measures

- Participant-completed surveys assessing:
  - General knowledge of child development
    - Knowledge of Infant Development Inventory (KIDI)
    - Knowledge of Infant Development Inventory – Preschool (KIDI-P)
  - Knowledge of their own child's development
    - Internally-developed survey
  - Identification of developmental concerns for their child
    - Internally-developed survey
  - Rate of follow-up regarding those concerns
    - Internally-developed survey
  - Risk for child maltreatment
    - Brief Child Abuse Potential Inventory

# Method: Criteria for Participation

- Parents or guardians of children between the ages of 2 months to five years

- Family incomes below the federal poverty level

- The target child did not have an identified disability or delay

- The target child scored above the cutoff on the *Ages & Stages Screening Questionnaire*

# Recruitment and Retention

- Difficult!!
- Recruitment
  - Study staff placed in the Sheltering Arms centers at drop-off/ pick-up
  - Working closely with Family Support Staff
  - $25 per one-hour assessment session, $10 for the 20-minute *Milestone Moments* overview session, $25 for each one-hour SafeCare home visiting session, including the overview session
- Retention
  - Appointment reminder cards
  - Call day before and 1-2 hours before appointment
  - For post and follow-up: start calling week before appointment due
  - Text messaging worked well
- 'No-Shows'
  - Approximately 80% of participants failed to show up for one or more appointments; some more than once
  - Despite compensation, location choice, and numerous phone calls, etc. this population was difficult to retain

# Quantitative Data Collection

# Phase 2: Procedure (1)

- Data were collected at three time points
  - Baseline
  - 7 weeks (SafeCare program was 6 weeks long)
  - 19 weeks (12 weeks after post)
- At each time point, the participants completed the assessments on a laptop using ACASI, a voice administration software

# Phase 2: Procedure (2)

- After completing the baseline assessment:
  - The control group received the materials with no explanation
  - The day care group received the *Milestone Moments* booklet paired with a standard script
  - The brief home visit group scheduled their visits within one week of baseline (ideally). During the home visit, participants received the *Milestone Moments* booklet with the standard script
  - The SafeCare® group scheduled their first home visits within one week of baseline. The participants received the *Milestone Moments* booklet at the end of the first visit with the standard script. The remaining five SafeCare® sessions occurred weekly following the first visit.

# Phase 2: Data Analysis

- Logistic regression, generalized linear modeling, repeated measures ANOVA, chi-square tests, t-tests, and correlations were used to analyze the quantitative data.

# Qualitative Data Collection

# Criteria for Interview Participation

- A participant in the RCT component of the study who completed follow-up assessment in the RCT

# Interview Procedures

- Semi-structured interviews were conducted with participants at the day care center in the parent resource room

- Interviews were audiotaped

- Participants were compensated for the interviews

- Interview protocol consisted of 14 questions inquiring about the parents' perceptions of the *Milestone Moments* booklet and their experiences in the study

# Example Interview Questions

- What content did you like in the *Milestone Moments* booklet?

- What did you learn from the booklet?

- How did you use the information in the booklet after you received it?

- How do you feel about receiving the booklet/child development information at this time in your life?

- What improvements would you make to the *Milestone Moments* booklet?

# Phase 3: Data Analysis

- To analyze the qualitative data, the constant comparative method of data analysis is being used as part of grounded theory methodology (Strauss & Corbin, 1990)

- This involves *open coding*, *axial coding*, and *selective coding* (Strauss & Corbin)

- Data analysis is still underway, but the preliminary results are reported below

# Results

# Results: Participants (1)

- We recruited and received consent from 108 participants, 90 of whom completed both baseline and post assessments

- The participants were predominantly Black/African American (86%, n = 94); 2% (n = 2) were Asian/Asian American, 1% (n = 1) were Native American/Alaska Native, 3% (n = 3) were White/Caucasian, 4% (n = 4) were mixed race, and 4% (n = 4) identified as 'other'

# Results: Participants (2)

- The sample was predominantly female, with 89.9% (n = 98) female and 9.2% (n = 10) male

- The ages of the participants ranged from 20 to 59, with the average age being 30.6 years of age

- When asked about their relationship to the target child, 87.9% (n = 95) indicated they were the mother of the child, 9.2% (n = 10) were fathers, 1 was a grandparent, and 1 was a legal guardian (but not mother, father, or grandparent)

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# Preliminary Results: Quantitative

- Results suggested that at post-assessment, parents reported:
  - increased knowledge of child development
  - fewer developmental concerns
  - an increased level of comfort approaching a professional about a developmental concern
  - positive perceptions of the *Milestone Moments* booklet

- Please note that these results are preliminary; they will continue to be updated and will then be submitted for peer review

# Parent-Initiated Referral

- Rates of parent-initiated referral at post-assessment did not differ across participant group, time, age of child, or by parent status

# Identification of Developmental Concerns

- Rates of parent identification of developmental concerns were *lower* at post-assessment (*M* = .20, *SD* = .40) than they were at baseline (*M* = .40, *SD* = .49), *t*(81) = 3.11, *p* <.01

- Rates of parent identification of developmental concerns at post-assessment did not differ across participant group, age of child, or across parent status

# Other Sources Inform Parent Concerns about Development

- Parents identified *fewer* concerns at post-assessment ($M = .21$, $SD = .41$) after receiving information from other sources than they did at baseline ($M = .44$, $SD = .50$), $t(62) = 2.95$, $p < .01$

- Rates of parent identification of developmental concerns after receiving information from other sources trended towards significance, $\chi^2(2) = 5.17$, $p = .08$, with more parents identifying concerns in the day care group (36%), followed by the brief home visit group (14%), and the SafeCare group (11%). No other differences were found across age of child or parent status.

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# Trends in Follow-Up after *Milestone Moments* Booklet

- After receiving the *Milestone Moments* booklet, 7 parents in the treatment groups followed up with professionals, utilizing these methods for follow-up: phone call (1 parent), email (1 parent), took for a visit (2 parents), had child screened (2 parents), or enrolled in intervention services (1 parent)

- Among the 7 parents across the treatment groups who initiated a referral after receiving the *Milestone Moments* booklet, 5 were in the Day Care group, 1 in the Brief Home Visit group, and 1 was in the Safe Care group

# Trends in Follow-Up after Other Information

- After receiving information from another source, 12 parents in the treatment groups followed up with professionals by phone call (3 parents), took for a visit (6 parents), or had child screened (3 parents).

- Of these 12 parents, 8 were in the day care group, 2 were in the Brief Home Visit group, and 2 were in the SafeCare group.

# Parent Knowledge of Infant Development
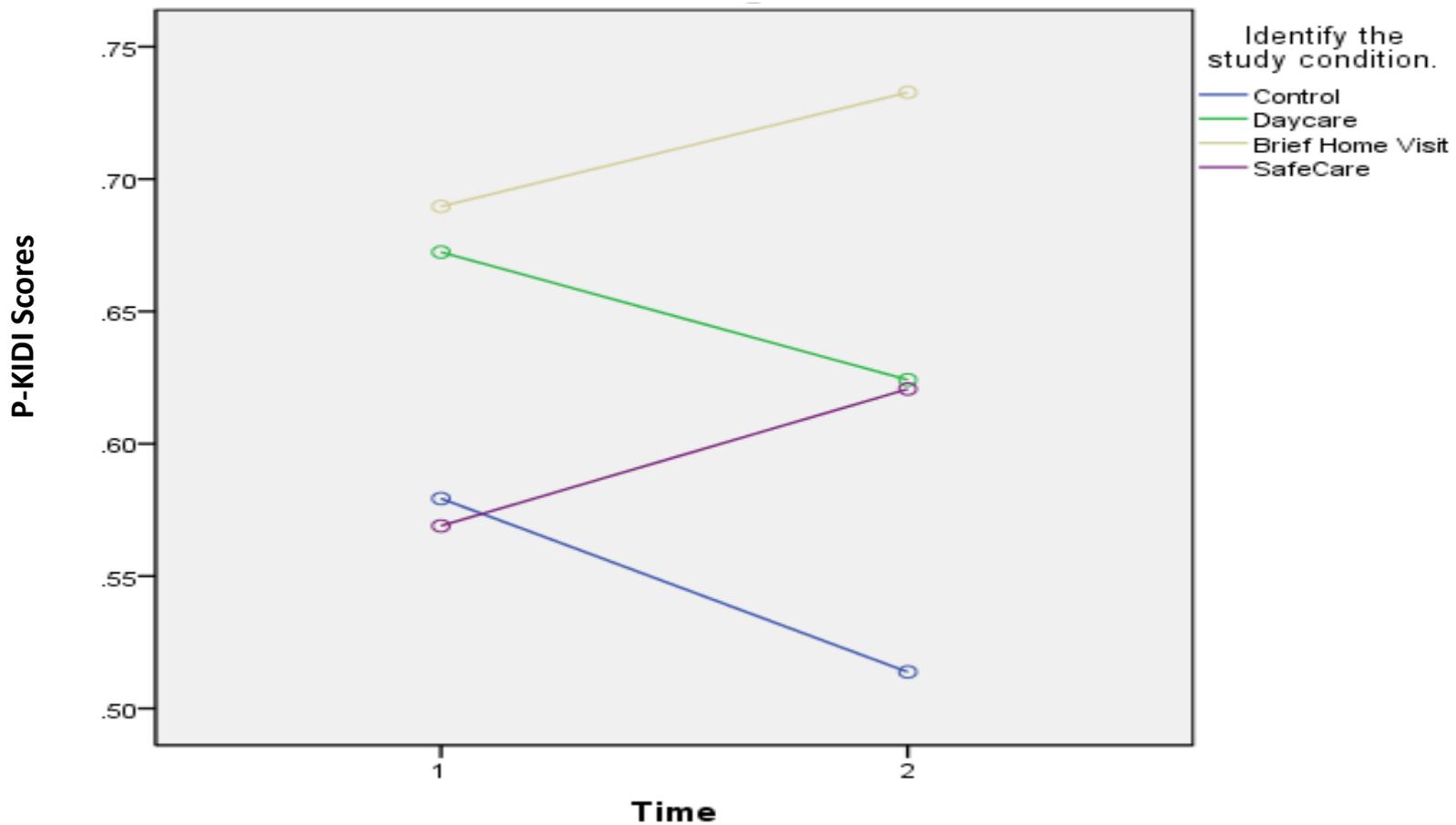
# Parent Knowledge of
# General Child Development
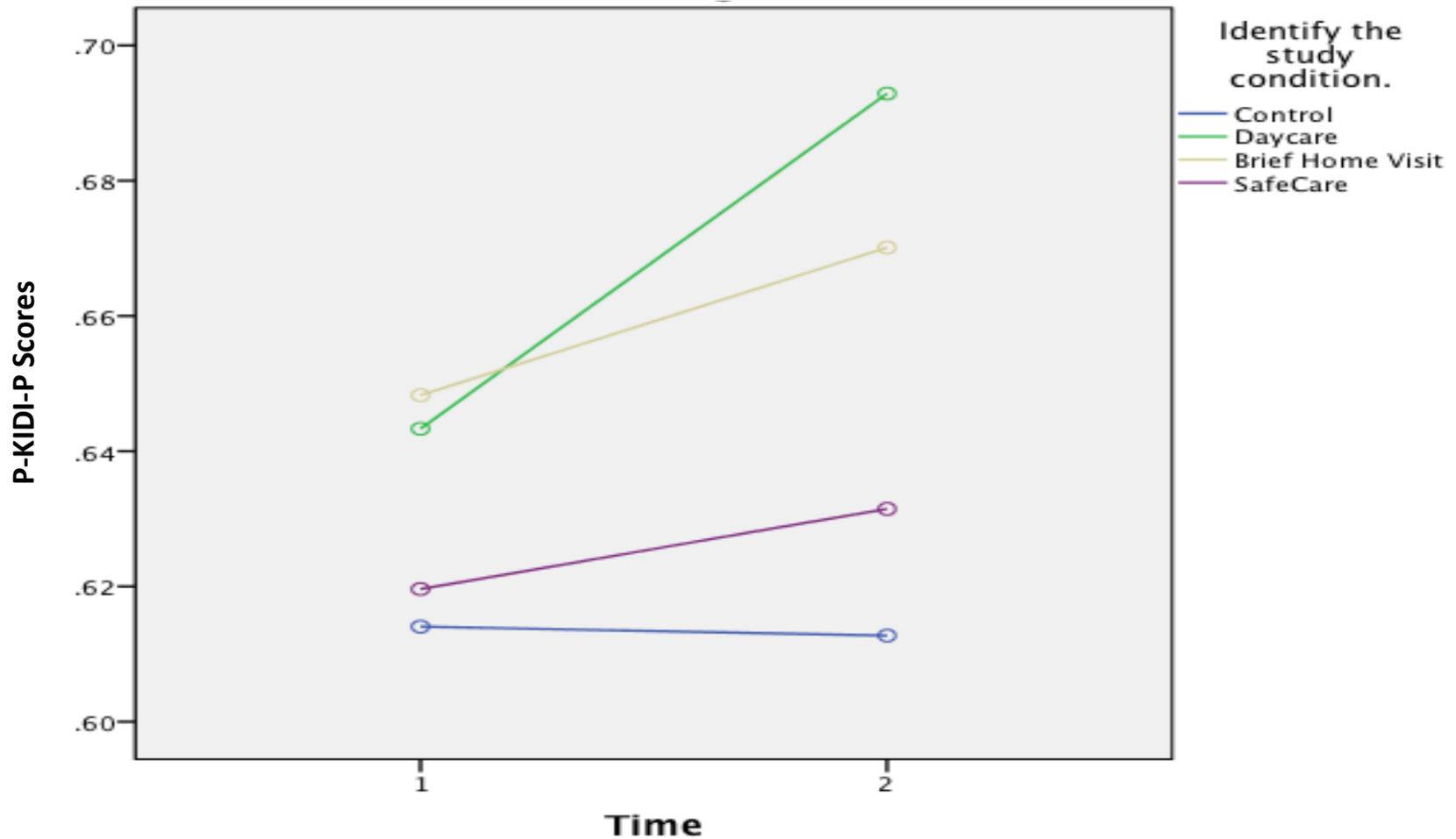
# Parent Knowledge of Their Own Child's Developmental Level

- Parents reported having greater knowledge of their child's development at post-assessment ($M$ = 9.99, $SD$ = 1.93) than at baseline ($M$ = 9.15, $SD$ = 2.36), $F$ (1, 77) = 12.28, $p < .001$

- This knowledge did not differ by group, age of child, or parent status

# Parent Level of Comfort with Professionals

- Parent comfort levels were higher at post-assessment ($M$ = 10.27, $SD$ = 1.64) than they were at baseline ($M$ =9.34, $SD$ = 2.27, $F$ (1, 78) = 14.87, $p$ <.001

- Parent comfort level over time varied significantly by group ($F$ (3, 78) = 3.47, $p$ = .02), although posthoc tests (Bonferonni, REGWQ, Tukey, Duncan) did not reveal significant pairwise differences between groups

- Ordered by reported levels of comfort at post-assessment (from highest to lowest): SafeCare ($M$ = 10.74, $SD$ =.37), day care ($M$ = 10.36, $SD$ =.35), brief home visit ($M$ =10.36, $SD$ = .35), and control ($M$ = 9.58, $SD$ = .37)

**Parent Levels of Comfort Over Time**
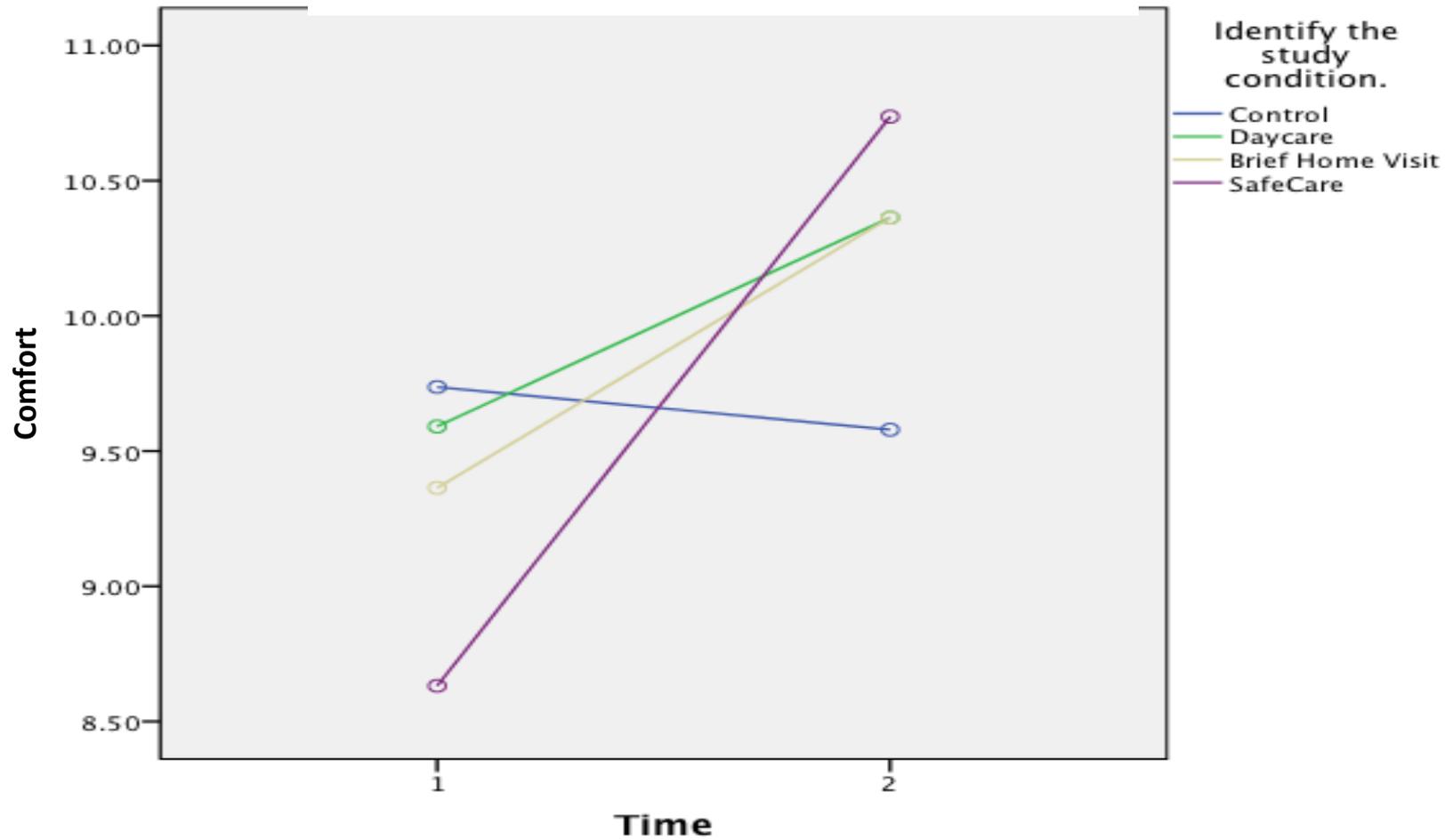
# Perceptions of *Milestone Moments*

- There was a trend in differences between groups in terms of parent perception of the *Milestone Moments* booklet, $F$ (2, 60) = 2.41, $p$ =.10

- Although only a trend, parents in the day care group reported feeling more strongly that the *Milestone Moments* booklet gave them new information ($M$ = 3.59, $SD$ = .50), followed by SafeCare ($M$ = 3.37, $SD$ = .60) and the brief home visit group ($M$ = 3.18, $SD$ = .73).

# Risk of Child Maltreatment

- Risk of child maltreatment for the overall sample was lower at post-assessment ($M = 4.51$, $SD = 4.10$) than at baseline ($M = 5.20$, $SD = 3.97$, $t(74) = 2.03$, $p < .05$

- This change over time did not vary by group condition, $F(3, 71) = .13$, $p = .94$

Risk of Maltreatment Over Time
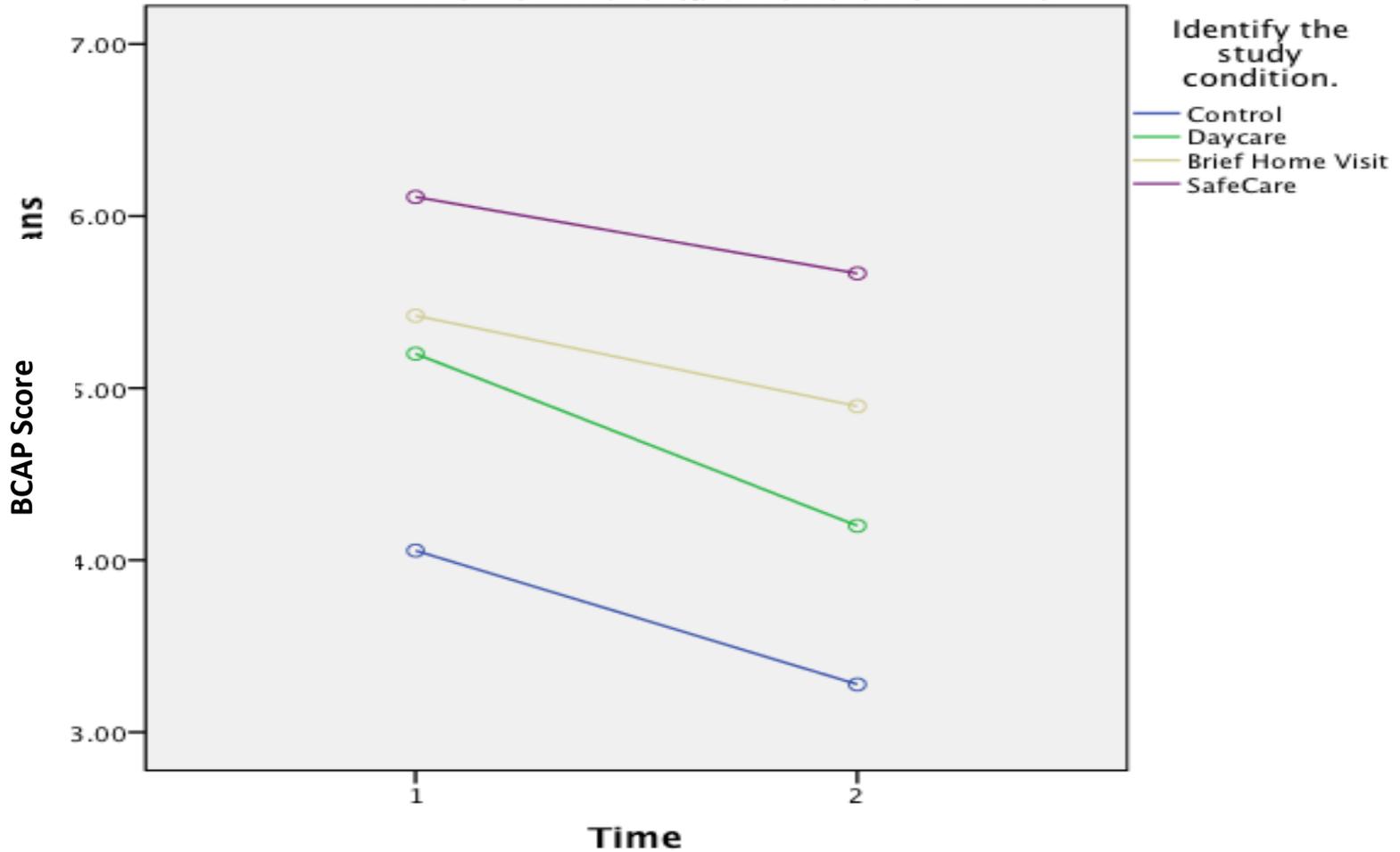
# Preliminary Results: Qualitative

- *Very* preliminary

- Data collection still in progress

- Close to achieving saturation

# Preliminary Results: Knowledge Change

- Participants indicated that they learned about general developmental milestones (n = 6), variation in child development (n = 4), behaviors that are suggestive of a potential developmental delay (n = 3), and awareness of pediatricians as a referral source when developmental concerns arise (n = 1)

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# Preliminary Results:
# Confirmed Typical Development

*"…so I read the milestones, because I thought she was behind on a lot of stuff, but like reading it more so…she's not…she's actually on time…everyone moves at their own pace….but she wasn't behind."*

*"I always thought certain ages like for instance … for her age, she's at 3 and for me she's pretty advanced and for my thinking only to find out that she's pretty much average."*

*"Like I said….I've always thought of my children as advanced anyway…{chuckle} but…it just …it kind of helps me keep my ego and pride I guess in check."*

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# Preliminary Results: Empowerment

*"It's a great tool, it's just a great way to educate and empower a parent…I know now that I can look back in the book and say 'ok, he's not counting on age, so I need to follow-up with somebody myself versus waiting for somebody else to follow-up.'"*

*"and I learned that if it's something that I need, I'm not afraid to ask assistance….cause I need help if it's a local center, daycare or his doctor, I'm not afraid if there are any questions to ask"*

*"When he was 3 years old and acting out I didn't go to the doctor and tell them, you know they'll ask you questions, 'Oh, is he so-in-so?' 'Oh, I'd say everything's fine.' That's what I said but all I'm saying now is if we go in for his six-year check up and he's not doing this, I'm going to say 'Well, I read in the little milestone booklet that he should be doing this.'"*

# Phase 3: Preliminary Recommendations

Consistent themes:

- Parents would like to have received *Milestone Moments* booklet earlier in their child's development

- It would be most helpful to have the milestones extend past the age of 5

# Limitations/Cautions

- Participants' children had already been screened with Ages and Stages Questionnaire; children who had positive screens were excluded from the study

- Sheltering Arms has an ongoing referral process for developmental, behavioral, and mental health concerns for the children they serve

- Sheltering Arms may offer a powerful setting variable – one can be poor, but not necessarily be underserved

# Next Steps and Conclusions

- Next steps
  - Analyze follow-up data
  - Complete collection and analysis of interview responses

- Conclusions
  - *Milestone Moments* booklets are helpful and memorable
  - No apparent advantage to in-home delivery of the booklet
  - May be an advantage to information delivery in child care setting

# Contact Information

**Center for Leadership in Disability
School of Public Health
Georgia State University
Box 3995
Atlanta, GA 30302**

**dcrimmins@gsu.edu
egraybill@gsu.edu
evinoski@gsu.edu**

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# Q & A

- Ask a question!

  - Type your question in the "question box" on your webinar dashboard.

  - The moderator will read the question.

# **Thank You!**

- Learn more about Act Early!

  - www.cdc.gov/actearly

  - www.aucd.org/actearly

- Questions about the webinar?

  - Email Tory Christensen (tchristensen@aucd.org)

*Please take a few minutes to complete the survey!*

# End Notes

- ## Measures

  *Knowledge of Infant Development Inventory (KIDI)*

  *Knowledge of Infant Development Inventory – Preschool (KIDI-P)*
  Use requires permission of the author: David MacPhee, Colorado State University
  970-491-5503 (Office), macphee@cahs.colostate.edu

  *Brief Child Abuse Potential Inventory (BCAP)*

  Ondersma, S. J., Chaffin, M., Simpson, S., & LeBreton, J. (2005).  The Brief Child Abuse
  Potential inventory:  Development and validation.  *Journal of Clinical Child and
  Adolescent Psychology, 34*, 301-311.

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