

## Baby Steps- Continued Innovations in Early Identification and Service Access

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Expanding the Research Base  
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## Research Questions

- When is the best time to screen for early identification of mental health and developmental problems?
- Are there good tools to use? Which ones?
- What types of issues do we find in very young children?
- Are there relationships between types of concern, age and gender?
- What are the implications for public policy?

## National Scientific Council for the Developing Child:

- A growing body of evidence tells us that emotional development begins early in life, that it is a critical aspect of the development of overall brain architecture, and that it has enormous consequences over the course of a lifetime....Yet, emotional development often receives relatively little recognition as a core emerging capacity in the early childhood years (2006).

## From Neurons to Neighborhoods:

- Compensating for missed opportunities, such as the failure to detect early difficulties or the lack of environments rich in language, often requires extensive intervention, if not heroic efforts, later in life (Shonkoff and Phillips, 2000).

## Yet we are leaving many children behind! A parent's story:

"Matthew was a child who had difficulty falling asleep or calming himself whenever anything happened....He had a lot of separation anxiety when he started preschool at age 3....Going to bed at night was a time of great anxiety. By age 3, he had developed a nighttime ritual which included spraying "magic air" out of an empty mister in every corner of his room. The ritual lasted 20-25 minutes each night and if interrupted, had to be restarted from the beginning. **When his mother brought him to the pediatrician, she was told that he would grow out of it. He was later diagnosed with OCD at age 6.**"

## Universal Screening has no system in place

- **Periodic developmental / mental health screening has been recommended by:**
  - The Surgeon General's Report (1999)
  - The American Academy of Pediatrics (2001)
  - The President's New Freedom Commission on Children's Mental Health (2003)
- **Yet there is no mandate, no workable reimbursement stream, and no system in place!**

### Baby Steps Research in Cambridge and Somerville, MA: Phase I – Years I-III

- Baseline assessment of community screening and referral patterns
- Parent focus groups on their experience of identification and referral
- Screening of children ages 0-5 utilizing a parent survey in 3 settings
- Data analysis of incidence

### Baseline Assessment: What Do Providers Say?

Survey of early childhood providers – pediatric clinic, child care and preschool, public education, Early Intervention, WIC

- Most providers report screening young children informally for mental health
- **69% do not use formal screening tools for mental health of young children; no pediatricians do**
- Only 31% of providers screen for mental health of parents informally, and none use a formal tool

### What Do Parents of Very Young Children Say?

- Spotty word-of-mouth awareness of resources
- Language issues; need for bilingual resource guides
- Problems dealing with health insurers
- Brevity of pediatric appointments, especially with language/culture issues
- **Pediatrician as a person to trust**
- **Receptivity to being asked by the doctor**
- **Pediatric “wait and see” advice**

### What Do Parents of Children with Mental Health Problems Say?

- **MA Statewide survey (Health Care for All, PPAL)**
- **48% say they knew by age 4 that their seriously mentally ill child had problems**
- **48% said their primary health provider never or rarely asks about child mental health problems**
- **32% were unable to access services because they did not know how to find them**
- **Another 33% waited more than a year before receiving treatment as often as needed**

### Our Approach: Screening in Three Settings – N=260

- **Pediatrics.** Windsor Street - A busy health clinic of a large urban hospital (Cambridge Hospital). Well-child visits in a low-income, immigrant neighborhood
- **Low-Income Health Care.** WIC - Nutritional program for low income children under age five
- **Child Care.** Cambridge Department of Human Services (DHS) Preschool Childcare for children 33 months to kindergarten

### PEDS Screening Tool (Parents' Evaluation of Developmental Status)

[www.pedstest.com](http://www.pedstest.com)

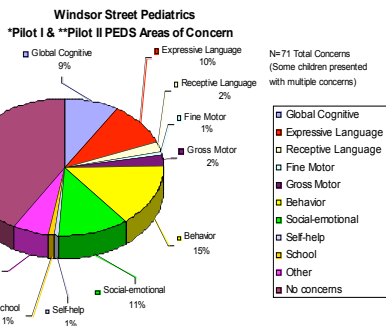
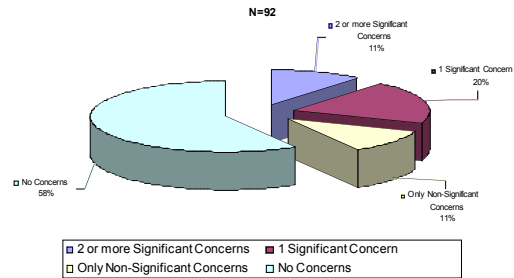
- 10 item parent questionnaire, covers all areas of development – 3 minutes to complete
- Ages birth to eight years
- Available in Spanish, Vietnamese, other languages in preparation; can be filled out by parent in two to three minutes at 5th grade reading level
- High sensitivity and specificity (70-80%); clear protocol for follow up, validated by research.

### The PEDS has 10 areas:

- Global-cognitive
- Expressive Language
- Receptive Language
- Fine Motor
- Gross Motor
- Behavior
- Social-Emotional
- Self-Help
- School
- Other

### Windsor Pediatrics Pilot I & II Study: PEDS Significant vs. Non-significant Concerns

Pilot I data collected 1/12/04-3/30/04 through use of PEDS screens  
Pilot II data collected 10/18/04-1/16/05



### PEDS Data Take-Home Points

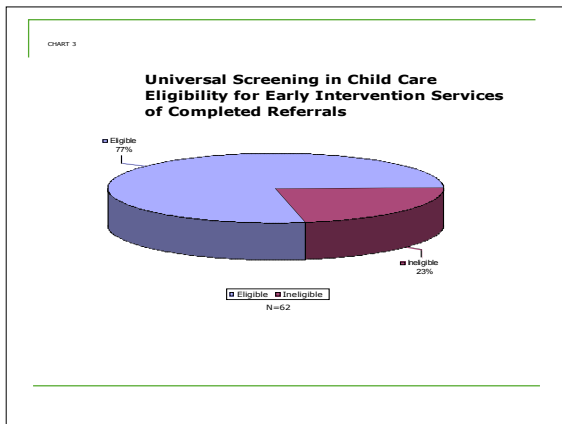
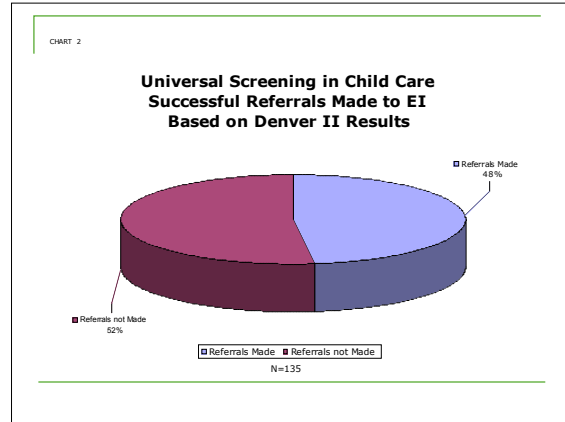
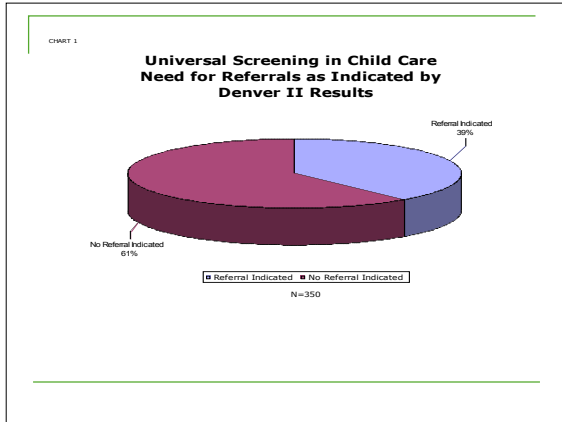
- Use of screening tool identifies concerns in about 1/3 of the birth to five population, regardless of setting - **31-39%**
- Nearly 1/3 of those concerns are social-emotional or behavioral – **26%-39%**
- Of those screened with concerns, nearly 1/4 are **referred** to a range of services
- Screening increases the number of referrals – **From zero to 10 in WIC**

### Phase II ( 2 years) – Are we using the right tools in the right settings?

- Use of the Denver II (1992) in child care
  - A brief well-validated developmental test of social-emotional, language and fine/gross motor skills
  - Ages 0 – 6 years
  - Administered by trained examiners in interaction with the child - 15-30 minutes
  - Moderate sensitivity and specificity
  - [WWW.Denverii.com](http://WWW.Denverii.com)

### Method

- Retrospective study of Denver II screenings conducted by Early Intervention specialists
- Urban, low-income child care settings in Cambridge and Somerville, MA
- 5 years of screenings of children 0-3 years of age N=350
- How many screen positive?
- How many get services they need?

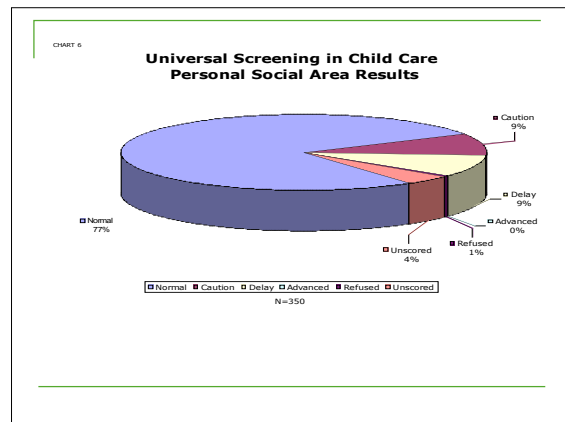


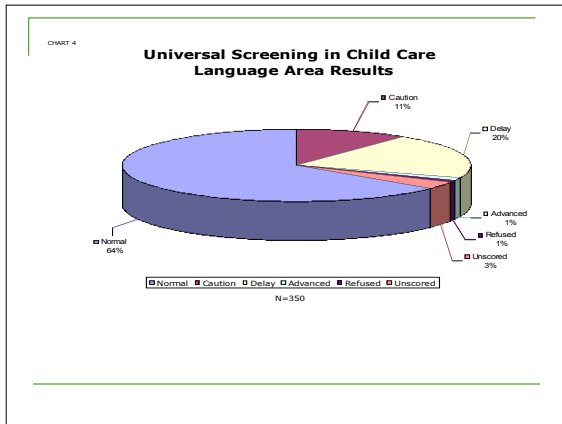
### What do the Denver II Data Tell us?

- There are many unidentified children with needs in low-income child care - **39%**
- But many don't get there - Less than half of those needing EI referral make it to EI assessment – **48%**. Why?
- The Denver II works reliably – Most of those referred are eligible for EI – **77%**

### What are the patterns of types of delay?

- Four areas:
  - Personal-Social (Mental Health)
  - Language
  - Fine Motor
  - Gross Motor
- Do we find Language and Personal-Social together?
- Are boys different from girls?
- Any "Delay" = "Suspect protocol"
- Two "Cautions" in any area = "Delay"
- "Delay" should lead to referral; "Caution" to worry





### Incidence of Types of Delay in the 0-3 y.o. Population

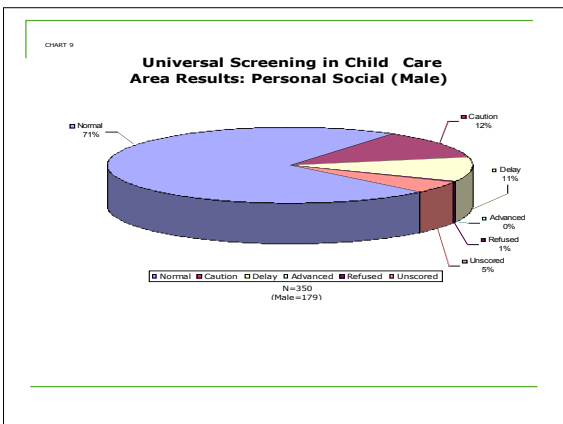
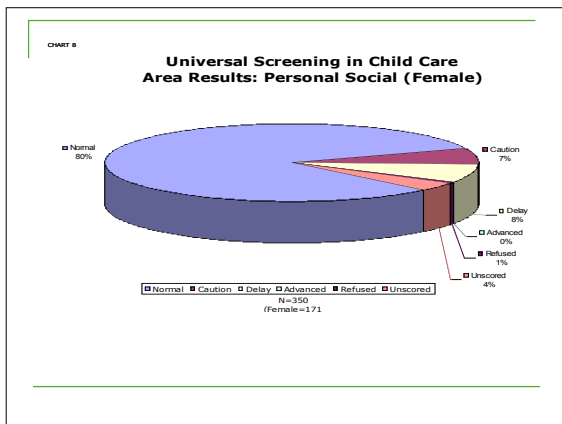
- Of 350 children screened for delay or concern (caution):
  - 18% showed personal-social problems
  - 31% showed language problems
  - 18% showed fine motor problems
  - 20% gross motor problems
- Are any of these correlated with each other? Language and personal-social?

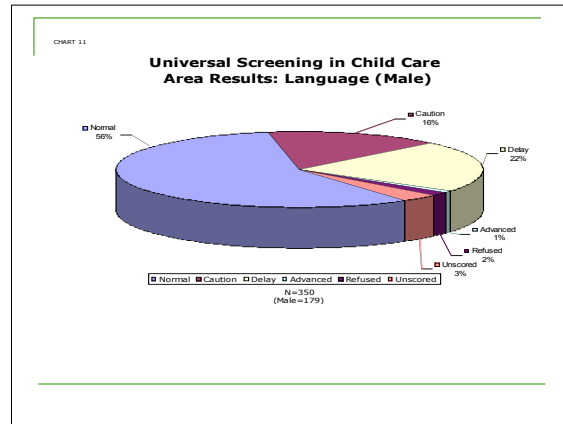
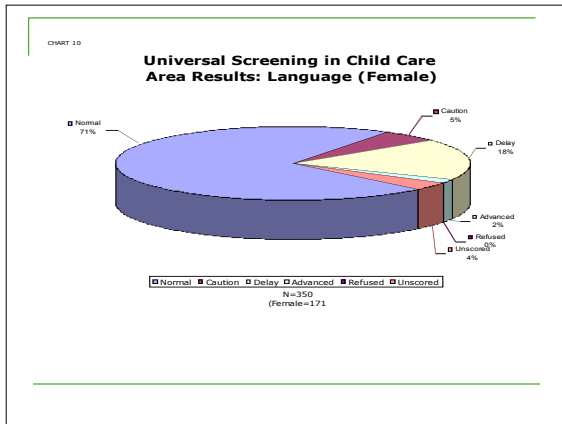
		Delay and Caution in Personal Social	Delay and Caution in Fine Motor	Delay and Caution in Language	Delay and Caution in Gross Motor
Delay and Caution in Personal Social	Pearson Correlation	1	.145	-.258	-.019
	Sig. (2-tailed)		.454	.128	.925
	N	65	29	36	27
Delay and Caution in Fine Motor	Pearson Correlation	.145	1	.198	.433(*)
	Sig. (2-tailed)	.454		.248	.021
	N	29	64	36	28
Delay and Caution in Language	Pearson Correlation	-.258	.198	1	.348
	Sig. (2-tailed)	.128	.248		.133
	N	36	36	107	38
Delay and Caution in Gross Motor	Pearson Correlation	-.019	.433(*)	.348	1
	Sig. (2-tailed)	.925	.021	.133	
	N	27	28	38	71

### Are there Gender Differences in Having Delays?

	Normal	Suspect
Male	86	83
Female	111	54

There is a relationship between being male and having delay – Pearson Chi-Square = 9.265. P=.002.





### Incidence of Caution or Delay in Boys and Girls by Domain

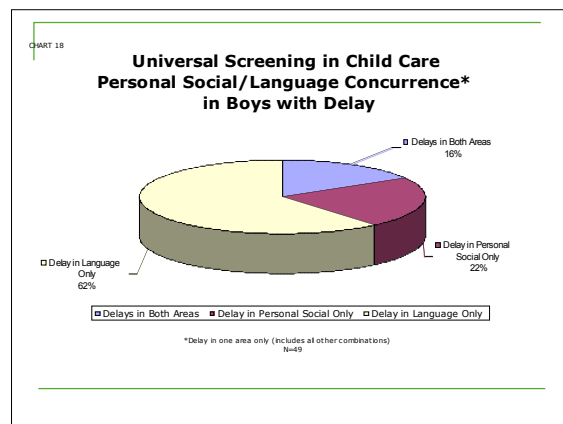
	<u>Female</u>	<u>Male</u>
<b>Personal-Social</b>	15%	23%
<b>Language</b>	23%	38%

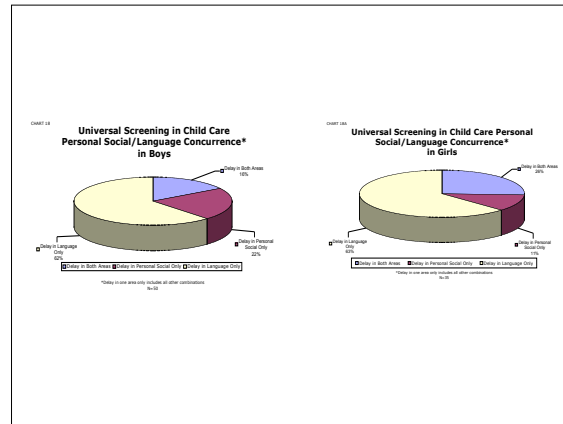
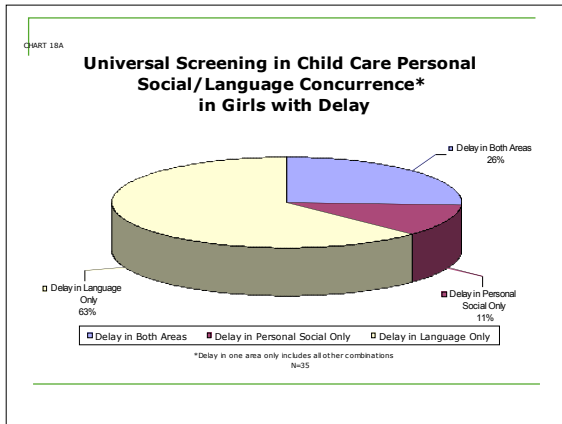
### Relationship between Gender and Delays/Cautions

	Chi-Square	Significance
Personal-Social	0.125	0.724
Language	4.12*	0.042

\*Significant @ P<.05

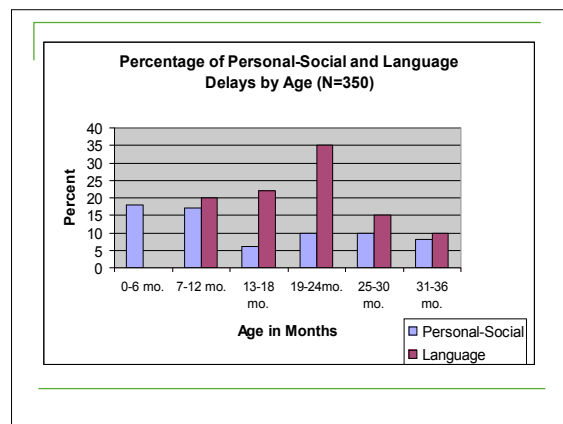
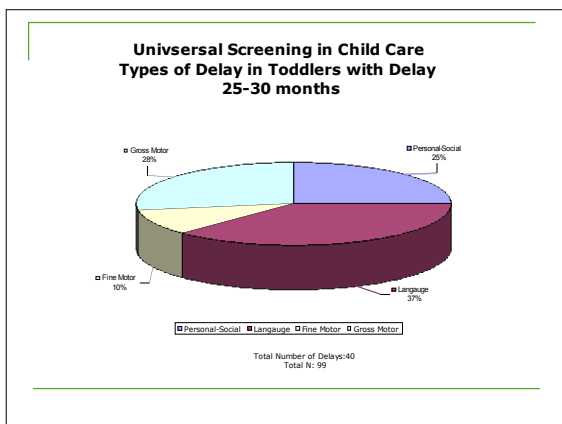
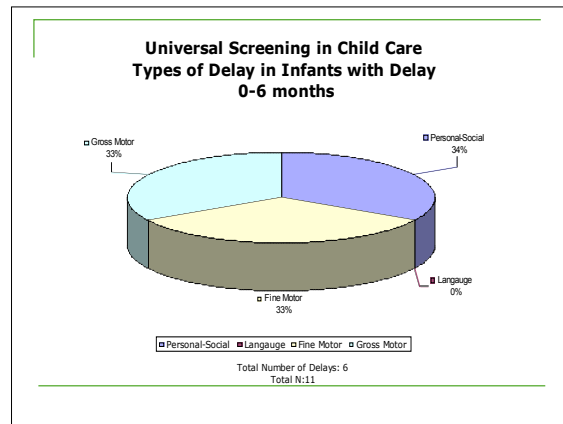
- ### Concurrence of social-emotional and communication concerns
- Are personal-social delays or concerns more common in children who have difficulty expressing themselves?
  - Co-morbidity of personal-social with language
  - Are boys, who outnumber girls in mental health problems, more likely to show concurrence of personal-social and language problems?





### When is the best time to screen?

- What is the incidence of different types of problems at specific ages?
- Does it make sense to begin screening in infancy, or later when language develops?



### What do the data suggest about screening for mental health?

- **Baby's do have mental health problems** – 18% of infants show personal-social delays at 0-6 months
- **The children are out there** – 39% age 0-3 in child care who have developmental problems
- **We have tools to find them** – 77% qualify for EI
- **Language and social-emotional concerns sometimes occur together** – 16% in boys with delay and 26% in girls with delay
- **WHY WAIT TO FIND THEM?**

### Challenges

**There is a need for the following:**

- Increased **awareness** of early childhood developmental and mental health as prominent health issues
- **Training** about what to look for, and what to do next for young children across systems of care
- Brief developmentally appropriate and accessible mental health **screening tools** for children under six in primary care
- Properly trained **early childhood mental health providers**
- **Reimbursement** streams that support universal screening
- Developmentally appropriate **reimbursable mental health diagnostic codes for very young children**

### Next steps:

- Pursue cross-system screening and training in pediatric practice
- Advocate for funding streams to support this
- Target social-emotional screening for very young children with disabilities – Children 0-3 who are in Early Intervention

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