


**Alabama Early Screening  
Improvement Training**  
Saturday, October 29, 2011  
Tuscaloosa, Alabama

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN™ 

Alabama Chapter

Produced by the Alabama Department of Public Health  
Video Communications and Distance Learning Division

**Standardized  
Developmental Screening**

**Faculty**

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**Commercial  
Interests Disclosure**

- Theresa Pinto
  - Does intend to discuss commercial products or services
  - Does not intend to discuss any non-FDA approved uses of products/providers of service
  - No significant financial relationship

**Commercial  
Interests Disclosure**

- Ashley Evans, MD, FAAP
  - Does not intend to discuss commercial products or services
  - Does not intend to discuss any non-FDA approved uses of products/providers of service
  - No significant financial relationship

**Ages and Stages – 3  
Screening Tool Workshop:  
A Hands-On Training**

- Presenter: Teri Pinto  
Demonstration Site Coordinator
- Alabama Assuring Better Child Health and Development Screening Initiative

### **Objectives**

- Describe the benefits of developmental screening
- Understand how to administer, score and interpret the ASQ-3

### **An Introduction to Ages and Stages Questionnaires® (ASQ-3): A Parent-Completed, Child-Monitoring System**

### **What Is the ASQ-3?**

- Parent- or caregiver-completed screening tools that encourage parental/caregiver involvement
- Series of questionnaires for children ages 1 month to 5 1/2 years
- 2-3 minutes to score

### **What Is the ASQ-3?**

- Tool to accurately identify children at risk for developmental delay- research sample of more than 12,000 diverse children
- Valid tool
  - Overall agreement across all questionnaires compared to gold standard testing = 83%

### **What Is the ASQ-3?**

- Sensitivity: 0.86 (high)
- Specificity: 0.85 (high)
- Reliability (test-retest & inter-rater) = 94%
- Used by many ABCD statewide screening programs

### **What Is the ASQ-3?**

- One time purchase
  - Unlimited copies
- Highly rated by the American Academy of Pediatrics, the U.S. Department of Health and Human Services and First Signs
- No additional screeners needed

### **ASQ-3 and Autism**

- Retrospective study on children diagnosed with ASD who had ASQ data
  - N = 58; 81% < 3 years
  - 100% identified
    - 96.6% failed communication
    - 86.2% failed personal-social
    - 81.0% failed problem solving

### **ASQ-3 and Autism**

- 100% of parents identified concerns
- High sensitivity in identifying ASD

### **What Is the ASQ-3?**

- Good teaching tool for parents
  - Helps them learn about child development and celebrate their own child's development
- Comes with Anticipatory Guidance Sheet for each screening interval

### **What Is the ASQ-3?**

- Strengths based
  - Reveals a child's strengths as well as areas of concerns
    - Easy to share results and develop rapport with parents

### **Developmental Domains Screened by the ASQ-3**

- ASQ-3 (screens five domains):
  1. Communication
  2. Gross motor
  3. Fine motor
  4. Problem solving
  5. Personal-social

### **Developmental Domains Screened by the ASQ-3**

- ASQ:SE
  - Social-emotional development

### ASQ-3 Materials

- The ASQ-3 questionnaires are available in English, Spanish, Korean, and French
  - Other translations also may be available
  - Contact Brookes Publishing for more information

### ASQ3 Materials and Information

- Published by Paul H. Brookes Publishing Co.
  - <http://www.brookespublishing.com>
  - <http://www.brookespublishing.com/asqupdates>
  - <http://www.agesandstages.com>

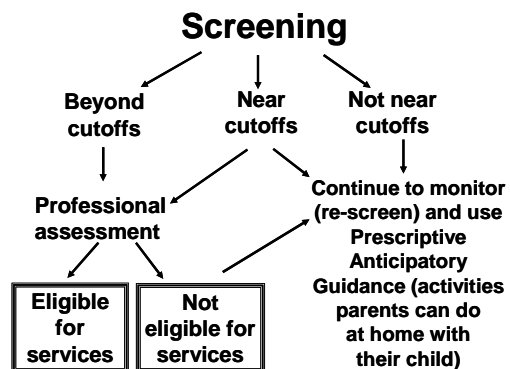
### Early Detection Through Surveillance and Screening

### What Is Screening?

- Brief, objective, and validated test
- Goal is to differentiate children that are “probably OK” vs. “needing additional investigation”

### What Is Screening?

- Designed to identify children who should receive more intensive diagnosis or evaluation from local Early Intervention (EI), Early Childhood Special Education (ECSE), health, and/or mental health agencies
- Performed at a set point in time



### **Benefits of Screening**

- Sorts children into 3 categories:
  - Needs additional evaluation: Did not pass screening test
  - Needs close monitoring: Passed screening test but has risk factors
  - Needs ongoing monitoring in the context of well-child care: Passed screening test and has no known risk factors

### **Incidence of Children Identified as Having a Disability by Age**

- Infants: 2.4%
- Preschool-age: 5.8%
- School-age: 11.6%

### **Features of the ASQ-3**

#### **Features of the ASQ-3**

- 21 questionnaire intervals:
  - 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, and 24 months
    - Spaced 2 months apart
  - 27, 30, 33, and 36 months
    - Spaced 3 months apart
  - 42, 48, 54, and 60 months
    - Spaced 6 months apart

### **Selecting the Correct Questionnaire**

- Confirm the child's exact age at the time of screening
- Quick Start Guide has instructions

### **Selecting the Correct Questionnaire**

- Administration date minus date of birth gives age of child
  - Year 2009, month 7, day 15
  - DOB 2005, month 3, day 10
  - Age of child is 4 years, 4 months, 5 days

### Selecting the Correct Questionnaire

- **Correct for prematurity**
  - For infants up to, but not including, 24 months of age who were born 3 or more weeks premature
- **Check age range at top of family information page and on the initial page of questionnaire interval**
  - Be sure age falls in range

### Features of the ASQ-3

- **Cover sheet**
  - Allows a program to personalize the ASQ-3 questionnaires
- **Information sheet**
- **Written at 4<sup>th</sup> – 6<sup>th</sup> grade reading level**
- **Each interval has 30 questions**
- **Parent or caregiver should answer the questions**

### Features of the ASQ-3

- **Each area contains six questions**
- **Questions are in hierarchical order, that is, the most difficult questions (numbers 5 and 6) are average skills for children of that age**
  - i.e., a 12 month skill for a 12 month-old child
- **Questions are answered “yes,” “sometimes,” and “not yet”**

### Features: The Overall Section

- **Un-scored section used to indicate parents’ concerns**
- **Very predictive**
- **Looks at quality of skills**
  - e.g., speech, movement

### Features: The Overall Section

- **4, 6, 8, 10, and 12 month questionnaires ask questions to detect cerebral palsy:**
  - “Does your baby use both hands equally well?”
  - “When you help your baby stand, are his feet flat on the surface most of the time?”

### Features: The Overall Section

- **Any questionable response requires follow-up**

### **Features: Information Summary Form**

- Each summary sheet is specific to an interval
- Summary sheets have four sections:
  - Bar graph of the five domain scores
  - Overall responses section
  - Score interpretation and recommendations
  - Follow-up action taken

### **ASQ-3 Administration and Scoring**

### **Prescreening Activities**

- Obtain consent from the parent or caregiver
- Explain the purpose of screening to parents, and review the questionnaire content
- Schedule the screening
- Mail the ASQ-3 two weeks before the visit, or leave the ASQ-3 with a parent on a previous visit to review
- Assemble materials (if necessary)

### **Correcting for Prematurity**

- Either of the following methods can be used to determine the appropriate interval for a child:
  - Use if child is three or more weeks premature, up to age two years
  - CDOB: Add weeks of prematurity to date of birth to obtain a corrected date of birth

### **Correcting for Prematurity**

- Adjusted age: Subtract weeks of prematurity from present age to determine corrected age

### **Correcting for Prematurity: CDOB**

- Andrew was born 6 weeks premature on April 30, 2006
  - When should Andrew receive the 16-month ASQ?
    - Step 1: Add 6 weeks to Andrew's date of birth (think due date)
      - Andrew's CDOB is June 14, 2006

### Correcting for Prematurity: CDOB

- **Step 2: Add 16 months to Andrew's CDOB**
  - Andrew should receive the questionnaire on or near October 14, 2007

### Correcting for Prematurity: Adjusted Age

- Andrew was born 6 weeks premature on April 30, 2006
- Which ASQ-3 should Andrew receive today?
  - Today's date is October 14, 2007
  - Andrew's actual age is 17 1/2 months

### Correcting for Prematurity: Adjusted Age

- Subtract 6 weeks from 17 1/2 months
- Andrew's adjusted age is 16 months

### Scoring the ASQ-3

- **Step 1: Total the points in each area**
  - “Yes” = 10
  - “Sometimes” = 5
  - “Not yet” = 0
- **Step 2: Transfer the area totals to the Information Summary form**
  - Fill-in the matching circle in the space provided

### Scoring the ASQ-3

- **Step 3: Read the answers to the “overall” section questions carefully and respond appropriately**
- **Step 4: Recommend further attention or assessment for any score falling near or into the shaded area**

### ASQ-3 Omitted Item(s)

- Try to obtain answers from the family
- It is okay to omit up to two items per area
- See The ASQ User's Guide or Quick Start Guide for additional guidance



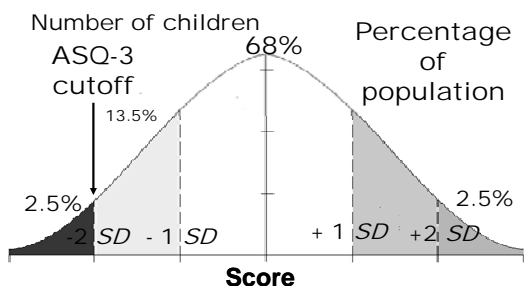
### ASQ-3 Omitted Item(s)

- Calculation
  - Step 1: Divide the total area score by the number of questions answered in that area
    - For example, 45 (points in personal social area) divided by 5 (questions) = 9 points

### ASQ-3 Omitted Item(s)

- Step 2: Add this number, which is the average score for items in this area, to the total area score to get a new total score
  - For example, 45 + 9 points = new personal social area total of 54 points

### Bell Curve Used to Determine Cutoff Point



### Follow-up/Referral Criteria

- Well above cutoff points in white
  - Provide follow-up activities and may rescreen
- Close to cutoffs in gray
  - Provide follow-up activities to practice specific skills
  - Make community referrals as appropriate
  - Rescreen in 4-6 months or sooner if necessary

### Follow-up/Referral Criteria

- Below cutoff in one or more areas in black
  - Refer for diagnostic assessment - send ASQ-3 Summary Sheet
    - Age Birth to 36 months
      - Early Intervention Child Find: 1-800-543-3098 (or TTY 800-499-1816)
      - AL Department of Rehabilitation Services: 334-281-8780

### Follow-up/Referral Criteria

- Below cutoff in one or more areas in black
  - Refer for diagnostic assessment - send ASQ-3 Summary Sheet
    - Age birth to 36 months
      - AL Public Health Department: Patient First Care Coordinator – Medicaid eligible children
      - Local school system: 3 years and up

### Parental Concerns

- Respond to all concerns
- Screen even if between recommended age for screening
- Refer if necessary

### Summary Sheet

- Last page of the ASQ-3
- Fill out identifying information
- Score and transfer totals to summary chart graph
- Transfer overall responses
  - Bold upper case responses require follow-up

### Summary Sheet

- Follow-up action taken
- Optional
  - Transfer item responses
- Send with referrals
- Copy in chart for Medicaid

### Information Needed to Guide Decisions: Risk and Protective Factors

- Biological/health factors
- Environmental factors
  - Stressful life events
  - Social supports
  - Family/caregiving environment

### Information Needed to Guide Decisions: Risk and Protective Factors

- Developmental history
- Family and cultural context
- Parent concerns

### Communicating Screening Results

- Assure the family that the discussion is confidential
- Review the purpose of screening
- Avoid terms such as test, pass, or fail
  - Instead, use below cutoff or near cutoff

### **Communicating Screening Results**

- Review the ASQ-3, and explain area scores
- Emphasize child and family strengths
- Provide specific examples of concerns
- Invite parents to share their observations and/or concerns

### **Communicating Screening Results**

- Prepare for the meeting carefully
  - Make notes about behaviors
  - Note information you need to gather (e.g., health history) from the family
  - Select a private, comfortable place to meet

### **Communicating Screening Results**

- Consider cultural or language issues
- Know your community resources
- Be calm!

### **In Summary**

- Screening tools can help bridge communication with families
- Screening tools can assist in making referrals to community agencies
- Referrals should be based on a variety of considerations in addition to scores

### **In Summary**

- Developmental issues are very complicated
- Use available resources to make decisions about what steps to take after screening

### **For More Information**

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