THE EARLIEST INDICATORS OF AUTISM SPECTRUM DISORDERS:

FROM IDENTIFICATION TO EARLY INTERVENTION

Juliann Woods, Ph.D.
&
Amy M. Wetherby, Ph.D.
Florida State University

Presented at DEC 2000 Conference

DSM IV Diagnostic Criteria for Autistic Disorder

- Impairment in Social Interaction
- Impairment in Communication
- Restricted Repertoire of Activity and Interests

Impairment in Social Interaction

- *Impairment in the use of nonverbal behavior*
- *Lack of spontaneous sharing*
- *Lack of social/emotional reciprocity*
- *Failure to develop peer relationships*

Impairment in Communication

- *Delay in or lack of development of spoken language & gestures*
- *Impairment in the ability to initiate or maintain conversation*
- *Repetitive and idiosyncratic use of language*
- *Lack of pretend play*

Restricted Repertoire of Activity and Interests

- *Preoccupation with restricted patterns of interest*
- *Inflexible adherence to routines*
- *Repetitive movements*
- *Preoccupation with parts of objects*

DSM-IV Diagnostic Criteria for Pervasive Developmental Disorder

- Autistic Disorder
- PDD- Not Otherwise Specified
- Asperger's Disorder
- Rett's Disorder
- Childhood Disintegrative Disorder

Core Communication Deficits In Young Children with Autism

- CAPACITY FOR JOINT ATTENTION
  - Orienting to social stimuli
  - Shifting attention between people & objects
  - Sharing positive affect
  - Following gaze/point of another person
  - Drawing another's attention to objects and events for the purpose of sharing

Core Communication Deficits In Young Children with Autism

- CAPACITY FOR JOINT ATTENTION
- CAPACITY FOR SYMBOL USE
  - Using conventional & symbolic gestures
  - Using communicative vocalizations
  - Using and understanding conventional meanings of words
  - Using objects functionally & in symbolic play

Accuracy of Specific Language Impairment Diagnosis at Age 2

- About half of children identified as late talkers at age 2 received a diagnosis of specific language impairment at age 3
- Children delayed in expressive language only were very likely to catch up on their own
- Children also delayed in receptive language, gestures, sounds, and play were more likely to have persisting language problems

(Paul, 1991; Rescorla, 1991; Thal, Tobias, & Morrison, 1991)

Accuracy of Autism Spectrum Diagnosis at Age 2

Diagnosis of Autistic Disorder

- 94% of children diagnosed at age 2 remained on the autism spectrum at age 3
- 72% retained the diagnosis of autism at age 3

Diagnosis of Atypical Autism (PDD-NOS)

- 74% of children diagnosed at age 2 remained on the autism spectrum at age 3
- 42% retained the diagnosis of PDD-NOS at age 3

(Lord, 1995; Lord & Risi, 2000)

Clinical Features of Autism Spectrum in Young Children

- *Social Impairments* were prominent at 24 months
- *Communication Impairments* were prominent at 24 months
- *Restricted Repertoire of Activities and Interests* were not prominent until 36 months

(Lord, 1995; Stone, Lee, Ashford, Brissie, Hepburn, Coonrod, & Weiss, in press)

Markers Based on CHAT at 18 months

- Proto-declarative pointing
- Gaze-monitoring
- Pretend play

38 of 16,235 failed these 3 key items (10 diagnosed PDD)

369 of 16,235 failed 2 of 3 key items (22 diagnosed PDD, 37 DD, and 310 typical)

35% SENSITIVITY 98% SPECIFICITY

(Baird, Charman, Baron-Cohen, Cox, Swettenham, Wheelwright, & Drew, 2000)

Features Distinguishing Autism Based on Home Videotapes at 12 months

- Pointing
- Showing
- Looking at Others
- Orienting to Name

Only the latter two distinguished children with autism from children with developmental delays.

(Osterling & Dawson, 1994; 1999)

Practice Parameters for Screening and Diagnosis of Autism Spectrum

Absolute Indications for Immediate Further Evaluation:

- No babbling by 12 months
- No gesturing (pointing, waving bye-bye) by 12 months
- No single words by 16 months
- No 2-word spontaneous (not just echolalic) phrases by 24 months
- ANY loss of ANY language or social skills at ANY age

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Child Neurology Society and American Academy of Neurology
(Filipek, Accardo, Baranek, et al., 1999)

Comprehensive Programs

- Curriculum addresses all areas of concern
- Focus on communication and social interaction
- Intervention linked to assessment
- Family collaboration
- Systematic teaching of functional skills
- Team coordination
- Ongoing evaluation for child and family outcomes

(*Dawson & Osterling, 1997*)

What we know.... what we want to know

- Intensity matters
  - What range is best for very young children?
- Early is better
  - How soon can we intervene and with what approach?
- Family participation is essential
  - What roles are priorities? What do parents do best?
- Joint attention, communication and engagement are key
  - What specific strategies are most effective?
- Interaction with peers is beneficial
  - How soon? How much? Who? Doing what?

Considerations for Intervention Planning

- Focus on what the child IS DOING, rather than what the child is not doing; on what the child's INTERESTS are, rather than the limitations
- Recognize the relevance of the child's conventional and unconventional behaviors for communication and interaction

Prioritizing Intervention

- Family concerns and priorities
- Disability specific priorities
  - Language and communication
  - Social interaction and relationships
  - Engagement and play
- Cognitive, adaptive, sensory and motor as prioritized by family and team as important

Why Family Participation

- Primary force behind the child's program now and in the future
- Vested interest in child's behavior and interaction development and use
- Time and resource availability
- Information, support, and skills
- Improved child and family outcomes

Identifying Contexts for Intervention

- Identify activities, routines, events that are preferred by the child and comfortable for the family. Routines that are predictable and meaningful can provide a familiar framework.
- Choose routines that
  - Build more sophisticated skills
  - Require joint attention
  - Provide structure for communication opportunities
  - Encourage imitation

Steps for Intervening in Natural Contexts

- Use developmental and functional assessment
- Discuss positive and negative "contexts"
- Establish "first line" communication and interaction functions
  - Behavior regulation (requesting and protesting)
  - Joint attention
  - Gestures (social signals) and choice making
  - Initiating and turn-taking (rate and quality)

Embedding Intervention

- Family and team must coordinate:
  - Targets within routines and activities
  - Sequence and frequency of embedding
  - Facilitators and locations of intervention
  - Methods used to initiate interaction, maintain child's engagement, encourage participation, and motivate child
  - Data collection and analysis

Systemizing Caregiver Interventions

- Clearly identify intervention routines and activities
- Match intervention targets (outcomes) to the appropriate routine or activity
- Observe sequence and strategies used
- Embed targets within typical sequence UNLESS sequence is dictated by child's disorder

Systemizing Caregiver Interventions

continued

- Identify opportunities to practice each outcome clearly… "more" isn't better
- Carefully plan who will be involved, when, and where it will occur
- Provide caregivers time to practice and problem solve "what might happen if…"
- Use natural cues with the routine