

TRI-STATE WEBINAR SERIES

Early Identification of Autism – Part 1

Presented by:
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Tri-State Autism Spectrum Disorder Webinar Series



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Learner Objectives

After completing this webinar, learners will be able to...

- Explain why it's important to identify autism symptoms in early childhood
- Identify several early emerging symptoms of ASD in young boys and girls
- Explain how to differentiate between ASD, a global developmental delay (or intellectual disability), and a speech-language impairment in young children.



WHY IDENTIFY EARLY
VS.
TAKING A WAIT-AND-SEE APPROACH?



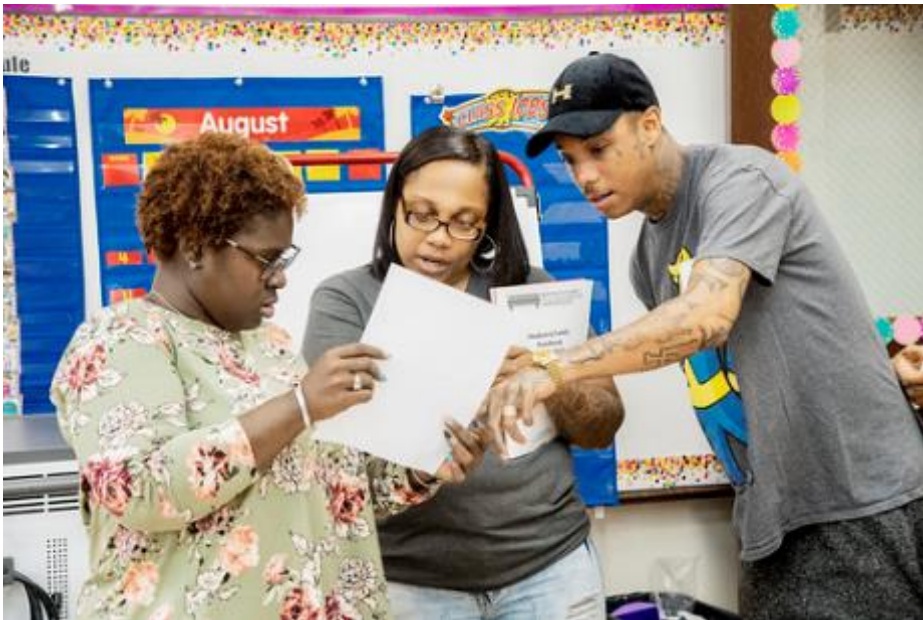
How we think about autism matters

Hopeless or hopeful?



How we think about our role with families matters

Caretaking or collaborating?



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To me, there are 3 arguments for early identification

- ❑ Cognitive Coping Perspective
- ❑ Prevention Science Approach
- ❑ Practical Aspects



Cognitive Coping Perspective

Emphasizes the importance of supporting how parents think about ASD as a critical part of how well they adjust as a family.

Values autonomy: Information is power.

Values transparency, candor, observing, narrating and not judging, withholding, or editing.

Building trust with families through the identification process sets the tone for the home-school collaboration.

(Benson, 2010; Lei & Oei, 2014; Vernhet et al., 2019)



Cognitive Coping Perspective (cont.)

Not naming it doesn't mean it doesn't exist.

Uncertainty is the hardest part for many parents.

Some parents will doubt themselves if you don't name it.



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Prevention Science Perspective

What is worse – a false positive or a false negative?

-- Is it potentially more harmful to identify ASD when it isn't actually there (false positive) or failing to identify ASD when it is there (false negative)?

-- If you're thinking on a systems level, you have a low tolerance for false positives, because you need to allocate resources appropriately.

-- If you're thinking on an individual child level, you have a low tolerance for false negatives, because you want your child to get the help he needs as early as possible.

-- Either way, you need an evidence-based approach to screening that includes the use of tools with strong predictive power (not too many false positives or negatives)



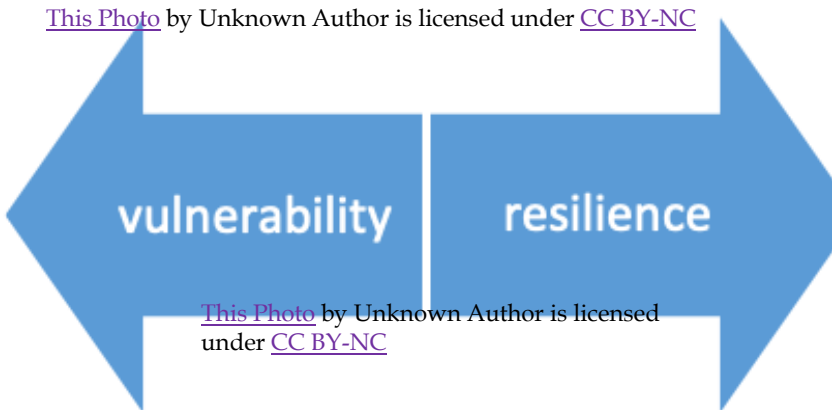
Think about how risk and protective factors impact outcomes.

Delayed identification
Delayed access
to intervention



Timely identification
Timely access
to intervention

Difficulty communicating
Difficulty interacting with peers



Functional communication
Supported social learning
opportunities

(Riggs, Hepburn, & Pinks, 2021; Shattuck et al., 2009)



Practical Aspects

School professionals need to feel competent to identify young children at risk of ASD.

Professional training, teamwork, and ongoing consultative support can all improve self-efficacy of school practitioners.

Important to conceptualize early identification as a screening process – the task is to identify risk based on current functioning, not make a lifelong diagnosis

If you name it, the child has a better chance of getting help that meets their needs.

Not naming it delays access to intervention.

If you don't name it, who will?

(Barbaro & Halder, 2016; Koegel et al., 2014; James et al., 2014)



EARLY EMERGING SYMPTOMS OF ASD



KEY IDEA: Early Symptoms (Under 3 years) are characterized by the lack of developmentally appropriate behaviors, not the presence of unusual behaviors.

- Lack of normal language development
- Lack of or loss of typical social interest
 - Sharing affect
 - Emotional contagion
- Lack of imitation
- Lack of typical play, including pretend play
- Positive symptoms (e.g., unusual behaviors that you observe) develop later

(Charman & Stone, 2008; Filipek et al., 1999; Ozonoff et al., 2009; Rotholz, et al., 2017; Zwaigenbaum et al., 2015)



Markers of ASD in 1st Year of Life

- Developmental delays in sensorimotor functioning (Estes et al., 2015)
- Reduced gaze fixation at 6 months (Chawarska et al., 2013)
- Limited range of intonation in vocalizations/babbling (Paul et al., 2011)



Markers of ASD in 1st Year of Life (cont.)



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- Deficits in dyadic social interaction
 - Lack of social smile
 - Delayed response to name
- Unusual affect
 - Lack of appropriate facial expressions
 - Impairments in affective synchrony

(Charman & Stone, 2008; Ozonoff et al., 2008; Scambler et al., 2007; Zwaigenbaum et al., 2015)



Markers of ASD in 2nd Year of Life

- Developmental delays in social-communication
- Significant delays in receptive language and fine motor skills, relative to nonverbal cognition
- Atypical eye contact
- Poor visual tracking
- Difficulty disengaging attention
- Inconsistent response to name



(Charman & Stone, 2008; Estes et al., 2015; Landa, 2008; Ozonoff et al., 2010; Zwaigenbaum et al., 2015)



Markers of ASD in 2nd Year of Life (cont.)

Less looking at caregivers' faces

Less monitoring of another's gaze

Less social imitation

Less shared affect

Less frequent joint attention behaviors

- (Charman & Stone, 2008; Estes et al., 2015; Landa, 2008; Ozonoff et al., 2010)



By 30 months, many children with autism can...

- Follow an adult's attention (i.e., “respond to joint attention”)
- Indicate a simple request – without coordinated eye contact – usually requesting improves in complexity by age 3
- Communicate to get access to objects, but not to get an adult's attention
 - However, requesting behavior in autism rarely includes coordinated eye gaze, gesture, and/or vocalizations
- Manipulate another person's hand like a tool to send a message



Discriminating Items on Early Screeners (18 months to 5 years)

- **Toddlers (18–36 mo)**
 - Does not respond to name
 - Fails to follow a point
 - Rarely directs others' attention
 - Poor affective reciprocity
 - Lack of functional play with doll
- **Preschool (36–60 mo)**
 - Does not engage in pretend play
 - Lack of gesture use
 - Does not perform simple actions with a doll
 - Lack of integrated communicative efforts
 - Poor imitation

Based on STAT (Stone), M-CHAT (Robins), Infant-Toddler Checklist (Wetherby), SRS-2 (Preschool Version; Constantino)



Impairments that Tend to Persist Across Early Childhood (from ages 2-5 years)

- Coordinating eye gaze and gesture
- Initiating gestures
- Initiating joint attention – particularly “higher levels” of integration/complexity



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Charman & Stone, 2008; Zwaigenbaum et al., 2015



Symptoms of Autism You Rarely See in 2-3 Year Olds

- Majority of toddlers with autism did NOT display the following:
 - Impaired conversation
 - Adherence to routine
 - Stereotyped language
 - Restricted interests
 - Preoccupations with parts of objects

(Charman & Stone, 2008; Ozonoff et al., 2008)



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Sometimes....

- Parents of young children report general behavior problems, with few reports of social difficulties
- Parents of young children notice unusual responses to sensation
- Regression of communication skills occurs in approximately 15-30% of cases

(Estes et al., 20015; Filipek et al., 1999; Johnson & Myers, 2007; Landa et al., 2008; Zwaigenbaum et al., 2015)



Absolute Indications for Further Developmental Evaluation

- No babbling by 12 months
- No gesturing by 12 months
- No single words by 16 months
- No 2-word spontaneous phrases by 24 months
- Any loss of any language or social skills at any time



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(American Academy of Pediatrics, CDC/Learn the Signs, Johnson & Myers, 2008)



In summary, the results of these studies suggest that abnormalities in infancy & toddlerhood are:

- Negative symptoms (absence, or lack of well-integrated skills)
- Subtle & qualitative
- Impacted by child's overall developmental functioning
- A matter of reduced frequency, not complete absence
- Inconsistent: Presence of intact behavior sometimes does not mean everything is okay

(Charman & Stone, 2008; Zwaigenbaum et al., 2015)



Sex Differences in ASD Identification

- We identify boys 4 X more often than girls (Baio, 2018 & ADDM Network based on 2014 data)
- Prevalence estimates from surveillance study (CDC, 2014 & ADDM Network based on 2010 data)
 - 1 in 42 males
 - 1 in 189 females





Girls are usually identified later than boys

Girls with relatively higher cognitive functioning are most likely to be missed when evaluated in early childhood

(Giarelli et al., 2010; Shattuck et al., 2009)



Sex Differences During Infancy: Results from a Prospective Baby Sibling Study

(Chawarska et al., 2016)

- Between 6-12 months of age, girls at high risk of ASD showed **enhanced attention** to social targets (e.g., faces)
 - More than high or low risk boys
 - Even more than compared to girls at low risk of ASD

Perhaps girls at risk for ASD have trouble shifting away from social information -→ so, they learn more core relatedness skills at young ages, but then show increased co-occurrence of social anxiety in later years due to hypervigilance



Sex Differences in Toddlers (14-35 months)

2-year old girls with ASD show fewer repetitive behaviors than male counterparts (Hartley & Sikora, 2009; Lord et al., 1982; Sipes et al., 2011)

Specifically:

less spinning

less overattachment to objects

less abnormal body use



Sex Differences in Toddlers (cont.)

Relative to young boys, young girls with ASD show **more significant difficulties** in

sharing affect

regulating intense emotions

showing empathy

(Carter et al., 2007; Lawson et al., 2018)



Study of Toddlers Stratified by Cognitive Functioning (Matheis, et al., 2019)

- **2-year old girls with ASD without a cognitive delay** showed **more** over-reactions to sounds, more clumsiness, and more problems with personal space than males with ASD without a cognitive delay and **fewer problems** with imitation, preoccupation with parts, abnormal visual fascinations
- **2-year old girls with ASD and cognitive delays** showed **more problems** with appropriate gesture use, a limited range of facial expressions, and a lack of exploration of toys than boys with ASD with a cognitive delay and **fewer problems** with attempting to communicate, and interacting for purely social purposes

DIFFERENTIAL IDENTIFICATION

Things to Think about when Deciding Between ASD and Global Developmental Delay or Speech-Language Impairment



ASD

- Social-communication skills are less well-developed than expected from overall developmental level
- Development is uneven across domains
- Social orienting, imitation, play, and nonverbal communication skills are relative weaknesses in child's profile
- Affect sharing and sense of connectedness in face-to-face interactions lacks consistent quality

vs. Global Developmental Delay

- Social-communication skills are not more impaired than other skills (i.e., on par with overall developmental level)
- Development is relatively evenly delayed across all domains
- Look for social orienting, imitation, play, and nonverbal communication skills consistent with child's overall developmental level (or nonverbal mental age)
- Affect sharing and early social relatedness are present consistently and with good social quality



ASD

vs.

Speech-Language Impairment

- Impairment is in understanding the process of communication
 - Limited range of functions of communication (reasons why child communicates)
 - Limited forms of communication (behaviors used to send a message; e.g., fewer gestures)
 - Limited attempts to repair or try another way to communicate if first attempts don't work
- Impairment is in cognitive aspects of linguistic development and/or motor aspects of producing speech
 - Child understands process of communication
 - Child communicates nonverbally for many purposes (e.g, sharing affect, requesting, rejecting)
 - Child initiates multiple ways of delivering messages – shows clear intention to send a message
 - Child attempts several nonverbal strategies to communicate
 - Child integrates verbal/nonverbal behaviors fluidly/naturally



Concluding Comments

Identifying children at risk for ASD during early childhood is important for child and family outcomes.

Early childhood professionals need support, training, and ongoing consultation as they gain proficiency in identifying early signs of ASD and talking to parents about their concerns.

The expectation is not to diagnose ASD, but to identify children who are at risk and provide parents with objective, thoughtful and developmentally sensitive information about areas of development that require intervention.

Early identification requires knowledge and experience in typical development, as most early symptoms reflect diminished quality, consistency, and/or frequency of early social-communication behaviors we expect to see emerge in the first 3 years of life.



Concluding Comments (cont.)

- We have tools that will help to elucidate a child's developmental profile and determine the most appropriate conceptualization. We'll cover those in part 2 of this webinar.
- We also have ideas about how to communicate observations and assessment results to parents in a manner that is empathic, realistic, and encourages collaboration. We cannot prevent or subvert the emotional difficulties parents may experience, but if we avoid having difficult conversations, we may unintentionally make things harder for families and children. We'll cover this topic in more detail in a future webinar.



Resources

- Autism Navigator: <https://autismnavigator.com/asd-video-glossary/>
- Learn the Signs/Act Early: <https://www.cdc.gov/ncbddd/actearly/index.html>
- Kennedy Krieger Video on Early Signs of Autism by Rebecca Landa, Ph.D.:
<https://youtu.be/YtvP5A50HpU>

Check out the professional development opportunities and library of archived webinars for the Tri-State Autism Network:

Colorado: <http://www.cde.state.co.us/cdesped/sd-autism>

Kansas: <https://www.ksdetasn.org/atbs/general-information>

Nebraska: <https://www.unl.edu/asdnetwork/about.shtml>



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THANK YOU FOR YOUR TIME AND ATTENTION

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