Early Screening & Referral-Red Flags for ASD in Pediatric Practice

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Disclosures

NONE

Why Screen Early for ASD?

- Common disorder 1/110 children
- No lab tests or pathognomonic sign
- Implications for family planning-family with child with autism-10% risk of having another child with similar disorder
- Parent concern-18 months with usual mean age of dx-3-4 years

EARLY INTERVENTION WORKS

Developmental Surveillance

- Screen development at every well child visit ex PEDS, ASQ
- Use algorithm of AAP-2007
- Screen is not diagnostic
- Screen for autism at 18 mos & 24 mos using M-CHAT
- ?Use of secondary screens in office
Possible Patterns of “Emergence” of Autism

- Early onset - present from early infancy
- Developmental plateau - normal early development slows & changes but no loss of skills
- Regression - normal development for most of first year followed by loss of social/language skills
- Autism symptoms emerge over the first 2 years of life - Eye gaze patterns early

Red Flags (1)

- No big smiles or joyful expressions by 5 mos
- No back and forth sharing of sounds, smiles or facial expressions by 9 mos or later
- No babbling by 12 months
- 3 point gaze

Red Flags (2)

- No back and forth gestures, such as pointing, showing, reaching or waving by 12 mos. Also eye contact
- No 2 word meaningful phrases (without prompt or repeat) by 2 years
- Any loss of speech or babbling or social skills at any age

Joint Attention

- 2 mos - reciprocal smile
- 5 mos - attachment to caregiver
- 8 mos - gaze monitoring
- 10 mos - follows a point
- 12 mos - proto imperative point
- 14 mos - shows objects
- 14 mos proto declarative point

Joint Attention
Social Referencing

- Difficulty in recognition of emotional significance of stimuli
- Difficulty in orienting to social stimuli-ex response to name
- Poor understanding of and responding to feelings of others-“theory of mind”
- Decreased imitation of social behaviors
- Difficulty with executive function

Communication

- Absent/delayed language without an attempt to compensate nonverbally
- Inconsistent use of words or regression
- Stereotypical or repetitive language-such as echolalia-not developmentally based

Repetitive/Restricted Interests

- Repetitive motor movements - can be part of normal development (ex-rocking)
- Intense interests-ex letters/numbers-common-may or may not be normal
- Intense interest in visual items - videos, toys with light, sound etc, may or may not be normal
- Patterns of play

Early Red Flag Tools

- M CHAT screen report-1st line-parent-fast/cheap
- Available online at First Signs for free
- Developmental Levels: Peds, ASQ – screen
- CSBS-DP infant toddler checklist
Early Red Flag Tools

- M CHAT has 23 questions- 6 of which are specific to ASD. Fail if 2 or more critical items failed or any 3 failed.
- High false positive rate-can use the M-CHAT follow up interview to decrease false positives
- Child may not have ASD-may have developmental difference

Second Level Screens-Examples

- Complement M CHAT-M CHAT follow up interview
- CSBS DP-Communication and Symbolic Behavior Scale Developmental Profile Caregiver questionnaire and behavior sample

What Do Red Flags Mean?

- Does not always mean ASD
- May have overall developmental delay
- May have communication issues
- May have regulatory issues
- May have combination of above
- May be normal

ASD Symptoms

- Triad of issues:
- Phenotypes vary with degree of various symptoms, diagnosis and comorbidity
Red Flag Symptoms-by age 2 yrs

- Gestural communication & joint attention
- Emotional responsivity & communication
- Language development
- Imitation
- Play patterns
- Repetitive & sensory behavior abnormalities

What to do about Red Flags on Primary Screen

- May do second level screen
- Parents want complete evaluation and intervention given the current ability to access information on the internet and media
- Parents cannot be told to “wait and see” if the M CHAT screen and M CHAT interview indicate significant concerns

Evaluation After Screen Concerns

- Refer for formal developmental/autism evaluation by an experienced clinician in ASD and with very young children
- Formal audiological exam
- Lead screen if has significant mouthing behaviors
- Neurological/metabolic evaluation if there is history of regression

Complexity of Early DX<2 Years

- Social behavior issues can occur to some degree in disorders other than autism-ex dd
- Some autistic young children show repetitive or odd behaviors before age 2
- Question stability of dx before 2 years due to changing behaviors-prospective study-Johns Hopkins Baby Sibs program-removed regressive type autism
Complexity of Early DX<2 Years

• Can successfully identify ASD in symptomatic 2 year olds
• Need to have developmental level to determine autism symptoms - ex play levels etc
• Children <2 years, there needs to be a re-evaluation in 6 months WHILE receiving intervention to redetermine dx-stability of dx if the diagnosis is not clear at 18 mos

Evaluation Guidelines

• Observe play/interaction with parents in play setting also
• Include parents in the process
• Ask parents to bring videotapes from home as toddlers may be “different” in the office setting & cooperation may not be optimal
• Videotape the evaluation, if possible

Complexity of Early DX<2 Years

• Standard of care evaluation includes:

  - Standardized Developmental Testing
  - Parent Questionnaires
  - Instrument such as Autism Diagnostic Observation Schedule

  - ADOS valid at 2 years - questionable before this age. New instrument in development
  - DSM 4 criteria - some not applicable at <2 years - interaction with peers, conversation
  - Need MSEL also for developmental level as may have dd as primary issue

Evaluation Guidelines (2)

• Detailed medical history, pregnancy and birth hx, feeding hx, sleep hx, family hx
• Trajectory of head circumference, present head circumference and parent head circumference
• Look for associated conditions ex TS
• Detailed developmental hx ?videotapes
Interventions For Toddlers with Red Flags

- Intervention is based on the specific characteristics of a child/family
- Access issues: barriers - examples: time to get an evaluation, timing to start intervention, insurance issues, eligibility issues, state budget issues, diagnostic label issues
- If there are concerns, some type of intervention should start.

Interventions For Toddlers with ASD

- ABA type therapy – 20 to 25 hours per week - many types
- Early Start model Denver model - Dawson study of 2009 showed efficacy of this model in toddlers diagnosed with ASD
- Small study but had control group

Interventions - Example

- ABA Discrete Trial – pivotal response
  - Intensive 1:1 therapy of 10 to 40 hours per week to increase attention, eye contact, joint attention, and communication
  - Use specific goals with statistical analysis
**Intervention For ASD**

- Behaviors are less likely to become firmly established if there is early intervention
- Blooming and Pruning in brain for new pathways
- Parents are grieving re diagnosis and trying to access services at same time
- IT WORKS

**Where To Refer**

Referrals for Intervention for Treatment of ASD
- Regional Center - 21 in State - children less than 3 years old
- School district - over 3 years of age
- Private therapy, as needed. AB 88 provides for some treatment of ASD through mental health coverage of private insurance.
- Family Resource Center for parent support

**Intervention for Toddlers with ASD (Dawson Study)**

- 2 years of intervention - children as young as 18 mos. 48 children with autism or PDD-NOS
- Randomized to community model or Early Start
- Early Start- 2 hours per day-five days a week-individualized program-ABA and relationship based- by trained therapists with parents

**Intervention for Toddlers with ASD (Dawson Study)**

- Early Start-in one year-mean increase in IQ of 15.4 pts vs 4.4 pts in control (Mullens)-primarily changes in receptive and expressive language.
- Adaptive skills-delayed but did not fall further behind in Early Start group
- Differences great than those seen in other developmental behavioral approaches with less intensive strategies
Advocacy for Intervention

- Early intervention works and is cost effective
- CA budget issues - impact
- First Five Efforts - work with community, Regional Center. Does universal preschool screens so children not picked up earlier can receive services

Parent Support

- Parent support is crucial
- Help parent navigate maze of systems
- Help each other
- Learn to “work” with their children to optimize outcome
- Vulnerable group since no specific test for dx and no “cure”