Management of Autism Spectrum Disorders

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Goals

- Review Autism Spectrum Disorders (ASD) diagnosis and screening strategies
- Issues in medical management of ASDs
- Issues in behavioral management of ASDs
- Review community resources
Autism vs. Other Childhood Disease Prevalence

Prevalence /10,000
What is Autism?

- Core deficits
  - Communication/speech
  - Social Behavior
  - Repetitive Behaviors/restrictive interests

- Adaptive Functioning
  - Toileting
  - Feeding
  - Sleep
  - Maladaptive Behavior

- Cognitive difficulties
Screening

• Questions to ask

  • Do you have any developmental concerns for your child?

  • What do you think the problem might be?

• Screen with MCHAT-R/F age 18-36 months and/or Ages and Stages (ASQ-3 and ASQ-SE)

  • Abnormal screen refer to Birth to 3

• Age > 36 months, screen with ASQ-3 and ASQ-SE
## M-CHAT-R™

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer no. Please circle yes or no for every question. Thank you very much.

1. If you point at something across the room, does your child look at it? *(For example, if you point at a toy or an animal, does your child look at the toy or animal?)*
   - Yes
   - No

2. Have you ever wondered if your child might be deaf?
   - Yes
   - No

3. Does your child play pretend or make-believe? *(For example, pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?)*
   - Yes
   - No

4. Does your child like climbing on things? *(For example, furniture, playground equipment, or stairs)*
   - Yes
   - No

5. Does your child make unusual finger movements near his or her eyes? *(For example, does your child wiggle his or her fingers close to his or her eyes?)*
   - Yes
   - No

6. Does your child point with one finger to ask for something or to get help? *(For example, pointing to a snack or toy that is out of reach)*
   - Yes
   - No

7. Does your child point with one finger to show you something interesting? *(For example, pointing to an airplane in the sky or a big truck in the road)*
   - Yes
   - No

8. Is your child interested in other children? *(For example, does your child watch other children, smile at them, or go to them?)*
   - Yes
   - No

9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? *(For example, showing you a flower, a stuffed animal, or a toy truck)*
   - Yes
   - No

10. Does your child respond when you call his or her name? *(For example, does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?)*
    - Yes
    - No
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. When you smile at your child, does he or she smile back at you?</td>
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<tr>
<td>12. Does your child get upset by everyday noises? (FOR EXAMPLE, does your child scream or cry to noise such as a vacuum cleaner or loud music?)</td>
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<tr>
<td>13. Does your child walk?</td>
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<tr>
<td>14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her?</td>
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<tr>
<td>15. Does your child try to copy what you do? (FOR EXAMPLE, wave bye-bye, clap, or make a funny noise when you do)</td>
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<tr>
<td>16. If you turn your head to look at something, does your child look around to see what you are looking at?</td>
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<tr>
<td>17. Does your child try to get you to watch him or her? (FOR EXAMPLE, does your child look at you for praise, or say “look” or “watch me”?)</td>
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<tr>
<td>18. Does your child understand when you tell him or her to do something? (FOR EXAMPLE, if you don’t point, can your child understand “put the book on the chair” or “bring me the blanket”?)</td>
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<tr>
<td>19. If something new happens, does your child look at your face to see how you feel about it? (FOR EXAMPLE, if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?)</td>
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<tr>
<td>20. Does your child like movement activities? (FOR EXAMPLE, being swung or bounced on your knee)</td>
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FIGURE 3
Recommended algorithm based on 2-stage M-CHAT-R/F screening.
M-CHAT R/F


- M-CHAT apps soon generally available
<table>
<thead>
<tr>
<th>Performance of M-CHAT versions</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M-CHAT</strong></td>
<td>75-85%</td>
<td>38%</td>
<td>11% Low Risk Population 36% High Risk Population</td>
</tr>
<tr>
<td><strong>M-CHAT F</strong></td>
<td></td>
<td></td>
<td>65% Low Risk Population 74% High Risk Population</td>
</tr>
<tr>
<td><strong>M-CHAT R Cutoff &gt;= 3</strong></td>
<td>91%</td>
<td>95%</td>
<td>13.8%</td>
</tr>
<tr>
<td><strong>M-CHAT R/F Cutoff &gt;= 2</strong></td>
<td>85%</td>
<td>99%</td>
<td>47.5%</td>
</tr>
</tbody>
</table>
Screening Strategy

Administer M-CHAT R at 18-24 months

- Score 0-2 no F/U unless scored before 24 months then repeat at 24 WCC = 93% cases
- Score 3-7 Administer F/U questionnaire by nursing = 6% cases
- Score > 7 Any screening need referral for eval/therapy = 1% cases

27% of screen positive children have some developmental delay/concern

100% of high score children have some developmental disability
Diagnosis

- Definitive diagnosis is not necessary to initiate appropriate therapy.

- Refer all children with suspected ASD or other developmental disorders to EI < 36 months or public school > 36 months evaluations.

- Waitlists exist at most major diagnostic centers but educational evaluations have mandated waiting times.

- Diagnosis is based on DSM-5 definitions and can be made by any physician following these guidelines
  
  - Additional testing as is done at developmental centers helps clarify a diagnosis BUT IS NOT NECESSARY for that diagnosis.
Educating Children with Autism

... Education, both directly of children, and of parents and teachers, is currently the primary form of treatment for autistic spectrum disorders. The education of children with autistic disorders was accepted as a public responsibility under the Education of All Handicapped Children Act in 1975.

The committee recommends that educational services begin as soon as a child is suspected of having an autistic spectrum disorder. Those services should include a minimum of 25 hours a week, 12 months a year, in which the child is engaged in systematically planned, and developmentally appropriate educational activity toward identified objectives.

... Each child must receive sufficient individualized attention on a daily basis so that adequate implementation of objectives can be carried out effectively. The priorities of focus include functional spontaneous communication, social instruction delivered throughout the day in various settings, cognitive development and play skills, and proactive approaches to behavior problems.

... Yet today, 25 years later, despite the federal mandate for appropriate education and intervention services, the goals, methods, and resources available vary considerably from state to state and from school system to school system. In the last few years, courts have become increasingly active forces in determining the methods applied and the resources allocated by school systems for the education of children with autistic spectrum disorders.
Management of Children With Autism Spectrum Disorders

Scott M. Myers, MD, Chris Plauché Johnson, MD, MEd, the Council on Children With Disabilities
- Entry into intervention as soon as an ASD diagnosis is seriously considered

- Intensive intervention, with active engagement of the child at least 25 hours per week, 12 months per year, in systematically planned, developmentally appropriate educational activities designed to address identified objectives

- Inclusion of a family component (including parent training as indicated)

- Promotion of opportunities for interaction with typically developing peers to the extent that these opportunities are helpful in addressing specified educational goals

- Implementation of strategies to apply learned skills to new environments and situations (generalization) and to maintain functional use of these skills

- Reduction of disruptive or maladaptive behavior by using empirically supported strategies, including functional assessment
AAP Management Guidelines

- Educational Interventions
  - Speech-Language Therapy
  - Structured teaching (TEACCH)
  - OT/Sensory Integration Therapy
  - Social Skills Instruction
  - ABA
  - Developmental Models (Denver, DIR, RDI, etc.)

- Medical Management
  - Seizures, GI, Sleep
  - Evaluation of Challenging Behaviors
  - Psychopharm
  - CAM treatments
  - Family Support
  - Co-occurring conditions
Educational Interventions

• Birth to Three (EI) programs - entry based on measured delays in one domain or clinical impression-25% delay or > 1.5 SD. Specific diagnosis not required.

• Public school programs - eligible ≥ 3 y/o through Child Find/IEP process. Determined by school district following Federal/State guidelines. Diagnosis not required but may be helpful.

• Specific curricula - TEACCH

• OT/PT/Speech/Sensory Therapies

• Parents must agree to treatment plan via the IFSP (B-3) or IEP process
ABA

- Applied Behavioral Analysis
  - Considered current best behavioral treatment
  - Addresses problem behavior and skill deficits through basic operant conditioning
  - Intensive, expensive, 1:1, adult to child
  - Programs plans delivered in home or center
  - BCBA develop Rx plan, may be provided by ABA technicians, family or others
  - In Washington State ABA can be paid for by Medicaid if Rx from a Washington State Autism Center of Excellence (COE). Insurance coverage variable with other insurance plans
Centers of Excellence System

- Network of statewide providers who are trained to make diagnoses and prescribe ABA therapy for Medicaid insured children.
- School districts generally honor COE diagnoses for school-based services
- Other health plans may or may not honor COE diagnoses for authorization of ABA services
Medical Issues Associated with ASDs

- Sleep Disturbance
- GI Problems
- Seizures
- Syndromic vs. Non-syndromic ASD
Sleep Disturbance

- Most common problem behavior in ASD and one which causes greatest parental stress
- Prevalence 40-80%
- Problems with sleep onset, sustaining sleep, shortened duration and early awakening
- Insomnia may result in increased daytime problem behavior and diminished learning
Sleep Disturbance Evaluation and Treatment

- Attempt to determine patterns - keep sleep diary
- Consider sleep study if severe, esp. if symptoms suggesting obstructive sleep apnea or restless leg syndrome
  - Check serum ferritin if restless leg syndrome considered
  - Consider GI cause (esp. GERD)
  - Consider nocturnal seizures
- Therapy
  - Sleep hygiene and behavior approaches i.e., positive bedtime routines, limit daytime sleep, visual schedules, avoid excessive screen time, etc.
  - Melatonin - no more than 3 mg. Better long acting preps coming out
  - Caution using $\alpha$-blockers, trazodone, risperidone, benzos
Non-specific GI symptoms appear to occur commonly in children with ASD.

Constipation, diarrhea, bloating and abdominal pain are frequent complaints.

Dietary interventions especially gluten and/or casein free diets are often tried especially in children who are more severely affected.

There are no studies showing benefit to dietary manipulations.

GI symptoms may be causes of worsening behavior and are often amenable to standard symptomatic treatment - e.g. antacids, laxatives.

Many children are on unusual or self inflicted restrictive diets which may contribute to GI issues.

Beware of engaging in extensive medical workups unless symptoms are unremitting or severe.
Behavior Issues

• Problem behaviors are common including self injury, tantrums, aggression, sleep and feeding difficulties

• Etiology of these may be complex or simple, but principles of assessment are reasonably easy

• Those children more severely affected with ASD, non-verbal, severe intellectual disability, co-occurring genetic disorder, etc. have more frequent and/or more severe behavior problems. Nevertheless many less severely affected have significant behavior issues

• Behavioral approaches including school-based functional behavioral assessment and ABA therapy are powerful tools that often are adequate alone and are preferred to meds

• Beware of use/overuse of psychopharmacology. Polypharmacy is a frequent occurrence in the more severely affected children and may be a problem in and of itself
DDx of problem behavior

• Disruption of routine
• Change in social environment - home, school
• Communication problem
• Painful medical issue - e.g. dental, GI, musculoskeletal
• Sleep Disturbance - OSA
• Medication side effect
• Seizures
Treatment

• Search for patterns of problem behavior - parental diaries/logs

• Understand the function that behavior serves: avoidance, attention getting, behavior makes child feel good (sensory), seeking access to favored activity

• Emphasize using positive behavioral support and judicious use of “time-out”

• Parent involvement and training is vital as well as recruitment of a team that may include school personnel, other family and friends

• Mental health resources include community mental health programs, private therapists. Parents should emphasize specific behavior needing help, e.g. aggression, rather than “Autism” when seeking mental health help

• Consider consult with the PAL line especially for psychopharmacology issues 866-599-7257
Co-occurring conditions

- ADHD
- ID
- Bipolar
- Anxiety
- Depression
- Rarely psychosis
Complementary and Alternative Therapies

• Highly prevalent usage

• Three general areas
  • Natural products - vitamins, herbal supplements
  • Mind/body work - yoga, chiropractic manipulation
  • Dietary interventions - gluten/casein free diet
  • Unusual medical therapies - chelation, anti-fungals
CAM

- If possible inquire about use of CAM

- So far no reliable studies supporting any CAM therapy have shown broad benefit.

- Almost all therapies are harmless, though extremes exist including chelation therapy, anti-fungals and anti-virals.

- Excessive use of CAM therapies may detract from more effective behavioral and educational therapies.

- Most families try these approaches for a while eventually discarding them. Use is much less in older children.
Some diagnostic resources

- Seattle Children’s Autism Center and Developmental Medicine Program
- UW Autism Center and CHDD - Child Development Clinic
- Mary Bridge Children’s Hospital Developmental/Behavioral Pediatrics
- Hope Central Community Clinic - SE Seattle
- Private child psychiatrists and neurologists
- Birth to 3 programs - Kindering, Boyer, Birth to 3 Federal Way, Holly Ridge
- Madigan Army Medical Center
Additional resources

- ABA advocacy
  - FEAT - Families for Effective Autism Treatment - https://featautismguide.wordpress.com - reasonably up-to-date autism resource guide

- Autism information
  - Autism Speaks - www.autismspeaks.org - major national autism voice - very useful toolkits
  - Autism is a disorder of the internet age - beware of much “fake news”