

**1 in 91**  
CDC Statistics from October 2009

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**Autism Spectrum Disorders  
Identification and Intervention**

GA NAPNAP 13<sup>th</sup> Annual Nuts and Bolts  
Conference

Linda Frye, MSN / CPNP

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**Objectives**

- To Present an Overview of Autism
- To Explain Surveillance and Screening
- To Review Diagnostic Criteria
- To Discuss Co-Morbid Conditions
- To Review Available Therapies and Interventions
- To Explain the Role of the Primary Care NP



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## Autism Spectrum Disorder

### Includes:

- Autism
- Pervasive Development Disorder – Not Otherwise Specified (PDD-NOS)
- Asperger's Syndrome




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### Picture of Autism No Typical Picture Exists

Boys Affected in 4:1 Ratio




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## Statistics

Approximately 1% of population of children in US ages 3 years to 17 years have ASD  
 Average cost estimate are \$60 Billion annually  
 60% of the cost are for adult services  
 Lifelong costs could be reduced by up to 2/3 with early diagnosis and intervention

Information from Autism Society website: <http://www.autism-society.org>

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### Cause

Most Cases of ASD Have No Known Cause

10-20% May Have a Genetic Link

- Duplication
- Deletion
- Transposition



**No Link Exists Between Vaccines and Autism**

**Lancet retracts study linking vaccine, autism: British medical journal, The Lancet, on Tuesday (February 2, 2010) retracted a flawed study published in 1998 linking the measles, mumps and rubella vaccine to autism and bowel disease.**

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### Known Medical Causes

Fragile X

15q Duplication-Maternally Linked Condition

Angelman Syndrome

Rett Syndrome

Smith-Lemli-Opitz Syndrome

Neuro-Cutaneous Disorders

- Tuberos Sclerosis
- Neurofibromatosis – Both Types 1 and 2
- Sturge Weber Disease

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### Warning Signs by Age

No big smiles or happy expressions by 6 months

No back and forth sharing by 9 months

No babbling by 12 months

No sharing gestures by 12 months

No words by 16 months

No 2 word phrases by 24 months

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### Additional Warning Signs at Any Age

- Poor eye contact
- Does not play appropriately with toys
- Plays alone or beside other children
- Appears to be hearing impaired – no response
- Echo speech or scripted speech

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### Important Point

- Know Normal Developmental Milestones So It Is Easier to Recognize Delays
- Early Recognition Results in Earlier Identification and Treatment to Improve the Child's Quality of Life
- Don't take a wait and see position, make the referral to Babies Can't Wait or Speech Therapy for Evaluation, Developmental Pediatrician, etc
- 15-18 months average delay from time concern is mentioned until referral is made

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### Surveillance - Screening

- Surveillance recommended at every well child visit – Developmental Milestones
- Screening recommended at 18 and 24 – 30 months – Autism Screening



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### Common Screening Tools

Parent report is the typical screening format

Ages and Stages

CHAT – Checklist for Autism in Toddlers

M-CHAT – Modified Checklist for Autism in Toddlers



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### Diagnostic Criteria

Refer to handouts for the **DSM-IV Criteria for Autism Spectrum Disorders**

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### Co-Morbid Conditions

Bowel Disorders

Fragile X

Depression/Anxiety

Cognitive Impairment

Sleep Disorder

Seizure Disorder

Feeding Issues

Tuberous Sclerosis

Behavior Disorders

Sensory Disorders

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## Therapies and Early Intervention

- Speech Therapy
- Occupational Therapy
- Physical Therapy
- Special Education
- Behavior Therapy (ABA)
- Feeding Therapy
- Medication




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## Some Other Therapies

- Chelation Therapy
- Gluten Free Casein Free Diet
- Light Therapy
- Hyperbaric Chamber



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 No Valid Studies to Show Effectiveness of These Therapies – Often Expensive and Some Can Be Dangerous

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## Developmental Evaluation

### Cognitive Developmental Assessment

- Capute Scales: Cognitive Adaptive Test/Clinical Linguistics Auditory Milestone Scale (CAT/CLAMS)
- Bayley Scales of Infant & Toddler Development 3<sup>rd</sup> E
- Mullen Scales of Early Learning
- Differential Ability Scale – 2<sup>nd</sup> Edition (DAS-II)
- Wechsler Preschool & Primary Scale of Intelligence – 3<sup>rd</sup> Ed. (WPPSI-III)
- K-SEALS - Kaufman Survey of Early Academic and Language Skills

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**Developmental Evaluation**

**Behavioral Questionnaires**

- Child Behavior Checklist (CBCL)
- The Behavior Rating Inventory of Executive Functions – Preschool Version (BRIEF)
- Gilliam Autism Rating Scale Second Ed (GARS-2)
- Social Responsiveness Scale (SRS)
- Conners Parent Rating Scale – Revised
- Vineland Adaptive Behavior Scales – 2<sup>nd</sup> Ed (VABS-II)

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**Developmental Evaluation**

**Other Tools**

- Childhood Autism Rating Scale (CARS)
- Autism Diagnostic Observation Schedule (ADOS) – Module 1, 2, 3
- Developmental Profile 3
- Clinical interview and observation
- Physical, neurological, and neuro motor examination
- Behavior observation

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**Role of Primary Care PNP**

- Recognize the Problem
- Make the Referrals – Don't Wait
- Be an Advocate for Patient/Parent
- Know what is out there to help
- Listen and Encourage

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### Parent Resources

Autism Society of America & GA Chapter  
 Emory Autism Resource Center (Potty Training)  
 Marcus Autism Center  
 Education: Babies Can't Wait/SpNPS  
 Behavior Based Interventions (ABA Therapy)  
 Social Skills Training  
 Activities – horses, karate, movies, music  
 Therapies – Speech, OT, Sensory Integration, Physical  
 Parent Support Groups  
 Books and Websites  
 Just Kids Magazine  
<http://www.atlantaparent.com/justkids/index.html>

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### Case Studies

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### Summary

10% of all children have developmental delay  
 50-80% who fail screening are not referred  
 15-18 month lag between concern and referral  
 Early identification leads to earlier intervention  
 Not every child who fails screen has ASD  
 Not every child with ASD has same presentation  
 Help is available, know what is available and  
 where to refer the patient/family for help

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