



**OKLAHOMA AUTISM
NETWORK**

Early Identification and Screening of Autism Spectrum Disorders

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Oklahoma Autism Network

April 29th, 2010

The Oklahoma Autism Network

- The Oklahoma Autism Network
 - Established in October 2003
 - First step for implementation of the Individuals with Autism and Their Families, Oklahoma Plan.
- Funding by:
 - The Department of Human Services, Developmental Disabilities Services Division
 - The Oklahoma State Department of Education, Special Education Services
- Sponsored by:

The University of Oklahoma Health Sciences Center, College of Allied Health, Department of Rehabilitation Science, Tolbert Center for Developmental Disabilities

What is the Oklahoma Plan?

- Outlines a vision to improve services to address the needs of individuals with Autism Spectrum Disorders across the lifespan.
- Developed by a working group over two years including:
 - Center for Learning and Leadership
 - Child Study Center
 - Department of Rehabilitation Services (DRS)
 - Development Disabilities Services Division, DHS
 - Families
 - JD McCarty Center
 - Lee Mitchener Tolbert Center
 - Oklahoma Commission on Children and Youth
 - Oklahoma Health Care Authority
 - Oklahoma State Department of Education

The Vision for Oklahoma's systems of services and supports

- Key principles:
 - Personal preferences and values are respected;
 - Continuum of effective, integrated options for assistance;
 - Each person with autism resides in the least restrictive environment; ideally in his/her own home;
 - Full acceptance and participation in the community;
 - Professionals are competent and educated; and
 - Services are effective and evidence-based

Mission

The Oklahoma Autism Network is committed to improving the outcomes and quality of life for individuals with autism and their families through education, professional development, advocacy, and systems change while respecting individual preferences, adhering to research and best practices, and promoting community inclusion.

The Oklahoma Autism Network

At a Glance

- The Oklahoma Autism Network was established in October 2003 as a statewide administrative unit to facilitate the planning, financing and administration of the various recommendations of the *Individuals with Autism and Their Families: Oklahoma Plan*.
- We coordinated the development and implementation of the *Autism Pilot Program*.
- We are the *only statewide autism organization* supporting individuals across the full autism spectrum from diagnosis through adulthood.
- We serve as the *state's information and referral system* providing evidence-based information through our toll-free telephone line, a comprehensive website, and trainings and technical assistance to families and professionals.
- We support the *various parent-led and community organizations across the state* to reach individuals in communities where they live.
- We collaborate with higher education, state agencies, parent initiatives and other programs to *continually improve systems of services and supports* including workforce development, policies and procedures, funding, and legislation.
- We coordinate activities with other groups and programs focused on Autism Spectrum Disorders so as to *maximize the limited resources in the state* versus duplicating programs and services.
- We bring *professionals from the private and public sector together* through our coordination of the Oklahoma City Professional Autism Coalition and our collaboration with the Tulsa Professional Autism Network.
- We offer a *resource center* that includes a library with books, videos, and access to tools to create low-tech supports, such as visual schedules and picture boards.

What is Autism?

- Autism Spectrum Disorders (ASD) are a group of related brain-based disorders that affect a child's behavior, social, and communication skills.
 - Because most children with ASD master the early motor skills such as sitting, crawling, and walking on time, delays in social and communication may not be as obvious.
 - However, by the age of three, children can be reliably diagnosed with autism.
- American Academy of Pediatrics, 2006

Pervasive Developmental Disorders (DSM IV-TR)

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

Autistic Disorder

- Social impairment
- Language and communication disorder
- Repetitive interests and activities
- Onset prior to 36 months

Asperger's disorder

- Social impairments
- Repetitive interests and activities
- Average intelligence

Rhett's Disorder

- Social impairment
- Language and communication disorder
- Onset prior to 36 months
- Period of normal development followed by a loss of skills
- Only diagnosed in girls

Childhood Disintegrative Disorder

- Social impairment
- Language and communication disorder
- Repetitive interests and activities
- Period of normal development followed by a significant loss of skills in several areas.
- Normal development prior to 36 months

Pervasive Developmental Disorder – Not Otherwise Specified

- Social Impairment
- Language and communication disorder and/or
- Repetitive interests and activities.

Autism Spectrum Disorders

- Autistic Disorder
- Asperger's Disorder
- Pervasive Developmental Disorder-Not Otherwise Specified

Associated disorders or symptoms:

- Seizures (25%)
- Nutritional or gastrointestinal disorders
- Tics (6%)
- Behavioral challenges (aggression, self-injury, self-stimulation, sleep disorders)
- Emotional disorders (anxiety, depression)
- Developmental disorders (mental retardation, verbal apraxia)

Autism Statistics

- Autism is now the second most common developmental disability.
- Autism affects more children than diabetes, cancer, and AIDS combined.
- Autism occurs in approximately 1 out of 150 children (1 in 94 boys). CDC 2007
- Approximately 560,000 children age 0 to 21 have autism in the United States.
- Approximately 6,005 Oklahoma children under 18 years of age with autism in 2007. *
- 4:1 boys versus girls
 - *Based on 2007 Census and CDC 1 in 150 prevalence of autism

Autism statistics, cont'd.

- Autism has increased, the reason is unclear.
- Some theories:
 - Increased awareness of autism
 - More screening tools and services
 - Changes in how autism has been defined and diagnosed.
 - Children with more mild symptoms are being diagnosed.
 - Increased prevalence due to increase in various environmental factors

Causes of Autism

- Current research links autism to biological or neurological differences in the brain.
- In some families there appears to be a pattern of autism or related disabilities, which suggests there may be a genetic basis to the disorder.
- However, at this time no one gene has been directly linked to autism.

UC Davis M.I.N.D. Institute Study

- Study from U.C. Davis M.I.N.D. Institute (2009) concluded that the increase in autism in California is NOT due to the earlier diagnosis, increased awareness, or inclusion of milder forms of autism in diagnostic criteria. This study encourages researchers to shift the focus from genetics to the chemicals and infectious microbes in the environment.

Brain Development in Autism

- Difference in brain growth, with a tendency for brains to grow faster than usual in early childhood and then grow more slowly.
- People with autism (on autopsy) have revealed various microscopic abnormalities in brain areas such as: cerebellum, limbic system, and cerebral cortex.
- Difference in some brain chemicals.

Characteristics of Autism in Children under 36 months

Social Interactions/Reciprocity

Children with Autism are *less likely* to:

- Respond to social bids
- Smile responsively
- Reciprocate affection
- Establish eye contact
- Imitate actions
- Engage in turn-taking play
- “Show-off”
- Show an interest in other children

W. Stone, PhD., Vanderbilt Univ.



Characteristics of Autism in Children under 36 months

Communication

Children with Autism are *less likely* to:

- Use gestures to communicate
- Direct another person's attention
- Use eye contact during communicative acts.
- Understand language or gestures

W. Stone, PhD., Vanderbilt Univ.

Characteristics of Autism in Children under 36 months

Restrictive/Repetitive Activities

Children with Autism are *less likely* to:

- Engage in a broad repertoire of play
- Create spontaneous play schemes
- Engage in pretend play with dolls
- Engage in imaginative play

W. Stone, PhD., Vanderbilt Univ.

Characteristics of Autism in Children under 36 months

Young Children with Autism *may*:

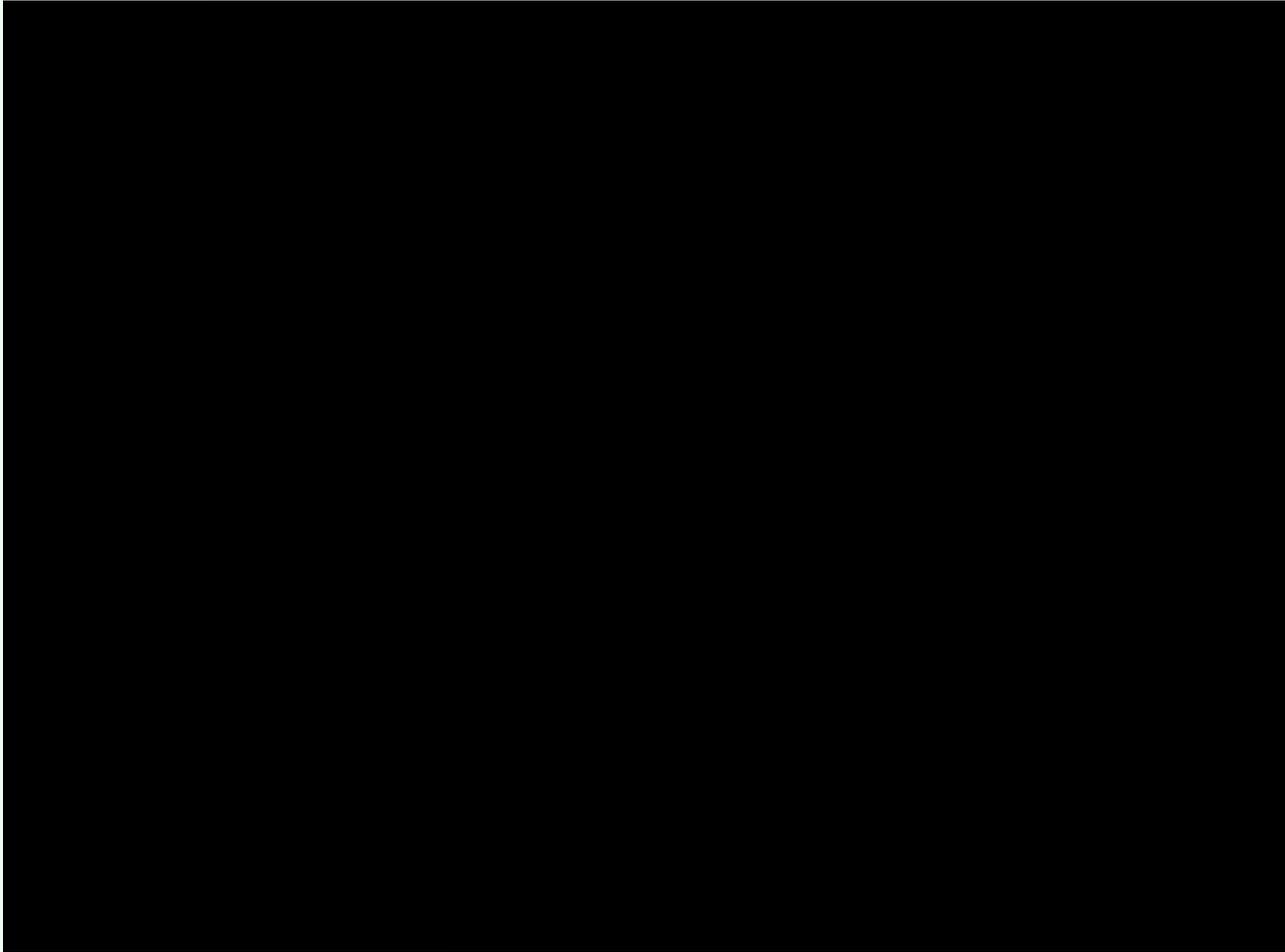
- Engage in repetitive play.
- Demonstrate repetitive motor behaviors.
- Inconsistently respond to sounds.
- Show unusual or obsessive interests.

W. Stone, PhD., Vanderbilt Univ.

ASD Video Glossary

- <http://autismspeaks.player.abacast.com/asdvideoglossary-0.1/player/autismspeaks>

Baby Steps



<http://www.cdc.gov/CDCTV/BabySteps/index.html>

Reasons for using a formal screening instrument to detect autism

- Less obvious appear earlier than more obvious symptoms.
- Negative symptoms (what's missing) appear first.
- Behavioral differences can be identified in the first 12 months of development.
- Currently accurate identification can happen at 2-3 years of age.



Screening for autism informs intervention

- If we think it is autism, intervention can be focused on areas associated with positive outcome for children with autism
 - Social communication
 - Emotional regulation
 - Transactional supports

When to Screen

- American Academy of Pediatrics recommends all children be screened for autism twice, at the 18 month and 24 month well check visits
 - American Academy of Pediatrics, 2007
- SoonerStart is implementing screening for all children in the program between 18-30 months. Children over 30 months will be screened based on parent concerns and all will likely be screened in the near future as staff are trained in additional screening tools.

Who can screen for autism?

- Screening for autism does not require a specific degree but rather:
 - Awareness of signs and symptoms of autism
 - Knowledge of a screening instrument or procedure
- The process of screening is facilitated by having experience with children who have a variety of abilities and disabilities.
- Screening is different than diagnosing.

Types of screening tools

- Questionnaires
 - Pros: quick and convenient, parent knows the child best
 - Cons: potential for bias, literacy requirements
- Interactive Observation
 - Pros: includes qualitative information
 - Cons: more time required to administer, training requirements

Levels of Screening

- Level 1
 - Screen for ASD vs. the general population
 - Well suited for primary care
- Level 2
 - Screen for Autism vs. other Developmental Disorders
 - Well suited for specialist, clinical therapist

ASD Screening Tools for Young Children

| | Interview | Interactive/ Observation |
|---------|----------------------------|-----------------------------|
| Level 1 | M-CHAT PDDST-II CAST | CHAT CHAT-23 |
| Level 2 | PDDST-II SCQ | STAT |



Modified Checklist for Autism in Toddlers (M-CHAT)

Robins, Fein, & Barton, 1999

Available at

http://www2.gsu.edu/~psydlr/Diana_L_Robins_Ph.D..html

Psychometric Properties

- Sensitivity - .85
- Specificity - .93

M-CHAT

- For Children 16 months – 30 months. Some studies used up to age 48 months.
- Child fails if “no” on 2 or more critical items or any 3 (or more) items are failed.
- Use of the Follow-up Interview can reduce “false” positives.
- If the child does not fail the test, but you still have concerns you can still refer them on.
- It is only a screening tool. If the child fails the tools, refer them for an assessment.



Checklist for Autism in Toddlers (CHAT)

Slides modified from presentation done by
Douglas Scambler, Ph.D.

1-5-05

For STARS Level 2 Challenging Behaviors Training

CHAT Items - Parent

1. Does your child enjoy being swung, bounced on your knee, etc?
2. Does your child take an interest in other children?
3. Does your child like climbing on things, such as up stairs?
4. Does your child enjoy playing peek-a-boo/hide-and-seek?
5. Does your child ever PRETEND, for example, to make a cup of tea using a toy cup and teapot, or pretend other things?
6. Does your child ever use his/her index finger to point, to ASK for something?
7. Does your child ever use his/her index finger to point, to indicate INTEREST in something?
8. Can your child play properly with small toys (e.g. cars or bricks) without just mouthing, fiddling or dropping them?
9. Does your child ever bring objects over to you (parent) to SHOW you something?

CHAT Items - Practitioner

1. During the appointment, has the child made eye contact with you?
2. Get child's attention, then point across the room at an interesting object and say 'Oh look! There's a (name of toy)!' Watch child's face. Does the child look across to see what you are pointing at?
3. Get the child's attention, then give child a miniature toy cup and teapot and say 'Can you make me a cup of tea?' Does the child pretend to pour out tea, drink it, etc.?
4. Say to the child 'Where's the light?', or 'Show me the light'. Does the child POINT with his/her index finger at the light?
5. Can the child build a tower of bricks? (If so, how many_____)

Risk Criteria

- High Risk - Fails Parent Interview items 5 & 7, and all 3 Critical Observation items.
- Medium Risk – Fails Parent item 7 and Observation item 4 (point to the light).
- Low Risk – Not in other two risk Groups.

(Baron-Cohen, et al, 2000)

Denver Risk Criteria

- A NO on observation item iv (point to the light) and at least one other observation item.
- *And* the parents score a NO on either item 7 or 5.

(Scambler, et al, 2001)

Psychometric Properties

Original Risk Criteria

- Sensitivity - .65
- Specificity - 1.00

With Denver Scoring Modifications

- Sensitivity - .85
- Specificity – 1.00



Screening Tool for Autism in Two-Year-Olds (STAT)

Slides modified from presentation done by
Wendy Stone, Ph.D. and Amy Swanson

October 6, 2008

Vanderbilt University

STAT

- A Level 2 screening tool for children 24-36 months.
- Consists of 12 items targeting play, motor imitation, and communication.
- Items selected discriminate between 2 y.o. with autism and matched samples.
- Not designed for children with severe sensory or motor deficits.

Psychometric Properties

- Sensitivity - .92
- Specificity - .85
- Inter-observer agreement - 1.00
- Test-retest reliability - .90

(Stone, et al., 2004)

Administration

- Follow administration directions for each item as described in the protocol.
- Record the child's behaviors in the boxes provided on the test protocol
- Determine Item Score (Pass, Fail or Refuse) according to the criteria provided.
- Transfer Item Scores to the Scoring Sheet and determine if the Sum of Scores is "At Risk" or "No Risk".

STAT items

- 2 Play Items
- 2 Requesting Items
- 4 Directing Attention Items
- 4 Imitation Items

Scoring the STAT

- Items are weighted based on the number of items in each sub-section (i.e., each play item is .5 points vs. each imitation item is .25 points).
- Score is based on the total point value of items *failed*.
- A score of 2 or greater is considered “*at risk*”.

Screening Siblings

- Younger siblings of children already diagnosed with autism have a higher risk for having autism.
- Parents and professionals need to watch carefully for developmental problems, especially in the areas of social and language skills.
- Refer if you see:
 - No babbling by 12 months.
 - No pointing or other gestures by 12 months
 - No single words by 16 months
 - No 2-word phrases by 24 months.
 - Loss of any language or social skills at any age.

Things I can do during a visit

- Point to an object and see if child follows the point.
- Observe and interact with the child to see if the child makes eye contact with you or socializes back and forth.
- Watch how child plays with different toys. Look for age-appropriate pretend play.
- Listen to the parents and their concerns.

I suspect autism, now what?

What can I say to the parent?

- Would you like me to give you a name or number you can call to get some ideas on teaching your child how to communicate?
- These are some things I noticed today (list examples), have you seen your child do these at other times? Maybe we should get an evaluation for your child for somebody to address these things?
- Do you have any concerns for your child? Do you see your child doing things differently than your other children?

How is Autism diagnosed?

- No medical tests for diagnosing autism.
- Diagnosis is based on observation of behaviors, child's communication, and developmental levels.
- Parental input is critical.
- Diagnosis needs to come from a team who is experienced and knowledgeable in working with children with autism.

Who Can Diagnose Autism?

- Medical Diagnosis (DSM-V)
 - Licensed psychologist
 - Medical doctor
- School Diagnosis (IDEA)
 - School psychologist

Components of a good assessment:

- Careful observation of play and child-caregiver interactions
- Detailed history and physical exam
- Developmental assessment of all skills
- Standardized autism-specific tool
 - CARS – Childhood Autism Rating Scale
 - PIA – Parent Interviews for Autism
 - GARS – Gilliam Autism Rating Scale
 - ADI-R – Autism Diagnostic Interview-Revised
 - ADOS – Autism Diagnostic Observation Scales
- Hearing test
- Language evaluation

Effective Educational Programs

- Offer choices for programming.
- Have clear, measurable goals.
- Be intense (approx. 20-25 hours of opportunities for learning).
- Encourage full parent involvement.
- Take place in everyday settings.
- Monitor progress often.

Where can I refer the family?

SoonerStart

- They provide early intervention services (birth – 3 years) which include child development, speech, occupational, and/or physical therapy.
- They will not give the child a diagnosis, but will help with intervention. They are doing the M-CHAT screening tool for all children 18-30 months
- Free to all families.
- Contact: OASIS 1-800-426-2747 and ask for your local SoonerStart office.

Referrals, cont...

Public Schools:

- You can have the family contact their local school district, Child Find coordinator.
- or
- The family can contact the Oklahoma State Department of Education at (405) 521-6205.

Referrals, cont...

Oklahoma Autism Network:

- We provide phone consults, trainings, and resources to family, professionals, or others interested in learning more about autism.
- www.okautism.org
- (405) 271-7476.



Questions?



Talking to Parents About Autism

Video

Other Resources

www.autism-society.org

www.autismspeaks.org

www.firstsigns.org

www.okautism.org

www.oklahomafamilynetwork.org

www.nectac.org

<http://www.aap.org/healthtopics/autism.cfm>

Contact Us

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