**Autism Spectrum Disorders**

Research, Training and Best Practices

COSA Conference October 2014 Joel Arick PhD

**ASD=Autism Spectrum Disorder**

Impairments in communication
Impairments in social interaction
Restricted, repetitive patterns of behavior and/or interests

Unusual responses to sensory experiences
Difficulties with change of routine, schedule

U. S. Federal Education Definition: Section 300.8

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**Critical Life Long Goals**

(Oregon Regional Programs Autism Working Group)

- To tolerate people and value interactions
- To communicate intentionally and effectively
- To organize information and learn meanings/purposes
- To tolerate change and accept new experiences
- To be independent of constant verbal directions
- To self-monitor and manage stress

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**Effective School Programs Should Use......**

- Evidence-based Instructional Strategies
  - National Standards Report
  - National Professional Development Center Report
  - AND
- Research-based Curricula

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**National Standards Project 2009**

- Evidence-Based Practice and Autism in the Schools (National Autism Center, 2009).
- Comprehensive analysis of available evidence about educational treatments for children with autism.
- Reviewed and analyzed hundreds of research articles.

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**National Professional Development Center Report 2014**

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National Standards Report: Established Treatments

- **Comprehensive Behavioral Treatment for Young Children** (22 studies)
- **Antecedent Package** (99 studies)
- **Behavioral Package** (231 studies)
- **Pivotal Response Treatment** (14 studies)
- **Schedules** (12 studies)
- **Self-management** (21 studies)
- **Peer Training Package** (33 studies)
- **Joint Attention Intervention** (6 studies)
- **Modeling** (50 studies)
- **Naturalistic Teaching Strategies** (32 studies)
- **Story-based Intervention Package** (21 studies)

National Standards Report: Findings

Approximately 91% of all established treatments for children with autism were developed from the behavioral literature.

Pattern of findings suggests that treatments from the behavioral literature have the strongest research support at this time.

Comprehensive behavioral packages have the most evidence.

**What is Applied Behavior Analysis (ABA)?**

- Refers to methods that change behavior in systematic and measurable ways
- Common Themes of applied behavior analysis interventions:
  - Baseline data is collected and analyzed
  - Assessment through observation of behavior, antecedents and consequences
  - Instruction guided by changing antecedents and consequences
  - Structured learning opportunities in 1:1, small group and natural environment settings
  - Data collection is used to determine progress and address program modifications
- An effective program uses ABA to teach new skills (within a developmental curriculum) and to address challenging behaviors.
Established Treatment

Behavioral Package

- 0-21 age range
- Applied Behavior Analysis
- Behavioral Psychology
- Positive Behavior Supports
- Examples:
  - Discrete Trial Training
  - Functional Communication Training
  - Token Economy

Video Examples

Established Treatment

Comprehensive Behavioral Treatment (Progress video)
Antecedent Package (Sandwich video)
Behavioral Package (Behavior video)

Video Examples

Established Treatment

Pivotal Response Training

- 0-9 age range
- Focus on pivotal behaviors that impact a wide range of functioning
  - Self-management
- Motivation
- Self-initiations
- Responsivity to multiple cues

Video Examples

Established Treatment

Pivotal Response Training (Imitation Spontaneous Video)

Video Examples

Established Treatment

Schedules

- 3-14 age range
- Presentation of task list that communicates a series of activities
- Examples:
  - Written words
  - Pictures/Photos
  - Work Stations
  - Reinforcement Strategies

Video Examples

Established Treatment

Schedules (Level II Transition Video)

Video Examples
Self-Management

Established Treatment

3-18 age range

Promotes independence
Teaches students with ASD to regulate their own behavior
Self-reinforce

Examples:
- Checklists
- Wrist counters
- Visual Prompts

Peer Training Packages

Established Treatment

3-24 age range

Teaching students without disabilities strategies for facilitating play and social interactions

Examples:
- Peer Networks
- Circle of friends
- Peer-mediated social interactions

Modeling

Established Treatment

3-18 age range

Demonstration of target behavior that results in an imitation of the target behavior

Examples:
- Live modeling
- Video modeling

Joint Attention

Established Treatment

0-5 age range

Respond or initiate joint attention
Builds foundational skills for learning

Examples:
- Pointing to objects
- Showing items to others
- Following eye gaze

Peer Packages (Peer-Computer Video)

Established Treatment

Video Examples
National Standards Report
Established Treatment

Naturalistic Teaching Strategies
- 0-9 age range
- Child directed interactions
- Within natural environment
- Examples: incidental teaching, milieu teaching, embedded teaching

National Standards Report
Established Treatment

Naturalistic Teaching Strategies (FR-Play with Adult)

Video Examples

National Standards Report
Established Treatment

Story-based intervention package
- 6-14 age range
- Written description of the situation in which specific behaviors are expected
- Answer the "who", "what", "when", "where" and "why"

National Standards Report Summary

11 Established Treatments
21 Emerging Treatments

Comprehensive behavioral packages have the most evidence.

www.nationalautismcenter.org

Evidence-Based Treatments

Ideas for School Programs

Consistent Themes from the Research

Importance of Early Intervention
Sufficient Intensity
Positive Behavior Intervention and Supports
Family Involvement and Parent Education
Curriculum Content Appropriate
Staff Training
• Fidelity
• System wide
Interventions Matched to Learner Characteristics
Curriculum Should

Address:
- Receptive Language Concepts
- Expressive Language Concepts
- Spontaneous Language Concepts
- Academic Skills
- Social Interaction Skills

Be Generalized Thru:
- Functional Routines
  - Preschool Routines
  - Snack, circle, centers
  - Transition
  - Elementary School Routines
  - Large group instruction,
  - Transition between classes
  - Middle/HS Routines
  - School and Community

Importance of Functional Routines

- Links skill acquisition to a functional outcome
  (Common Core State Standards)
- Focuses on access to the general education curriculum
- Teaches independence

Curriculum, IEP Goals, State Standards, Evidence-based Practices,
Instructional Content should work together....

Lesson Content

- Identifies present levels of performance
- Identifies next instructional targets (Lessons) for IEP Development
- Aligns to Common Core State Standards or Essential Elements
- Teaches to the content of standards and/or prerequisite skills needed to reach standards
- Instruction is provided in critical areas for students with autism including communication,
  self-management, social skills, and life skills.
- Use of evidence-based strategies for teaching processes
- Research-validated curricula

Evidence-based Instructional Methods/Practices

Integrity of Instructional Time

Considerations:
- Time of 1:1 instruction is an individual student decision
- Instruction on routines should be conducted throughout the typical school day to generalize
  skills learned during the 1:1 direct instruction
- ABA principles can be integrated throughout the student’s day.
**Staff Training**

- Fidelity of implementation
- System-wide
- On-going support
- Training should include:
  - Demonstration
  - Coaching
  - Follow-up training

**OrPATS: Oregon Program Autism Training Sites and Support**

| Current ORPATS STAFF: | John Gill, M.S.  
|                       | Jennie Willis, M.S.  
|                       | Darby Lasley, M.S.  
|                       | Brenda Nakada, M.Ed.  
|                       | Karen Shepherd, M.S.  

**Parent Training Project:**
- Brenda Nakada

**General Education-HFA Project:**
- Lauren Lux, M.S. and Sheila Magee, M.S.

**STAR Autism Support, Northwest Regional ESD, Oregon Regional Programs, EI/ECSE Programs and the Oregon Department of Education Collaborate to administer this project.**

**Oregon Statewide Training Network**

- Regional locations provide training to others in research-based practices across the state
- Training sites use evidence-based practices
- Several research studies have found students enrolled in the OrPATS training sites have made significant gains in language, academics and independence (see orpts.org for further information).
- Cadre of trained autism specialists provide training to others at these sites
- Between 2003-2014, established or maintained 43 sites (EI/ECSE; Elementary; Middle School)
- Release time reimbursement funds are available to visit training sites
- Additional information about the ORPATS project including the location and the contacts needed to visit a training site is available at the OrPATS website.

**New Training and Support From ORPATS: Now Available**

- On-line ASD Program Self-Assessment and Action Plan (In collaboration with the Oregon Autism Commission and Regional Programs)

  * Training Resource for General Educators to Support Students with High Functioning Autism
    - For further information attend one of the General Education workshops offered by OrPATS or the presentation at Cosa

  * Post-secondary Support
    - For further information attend one of the secondary workshops offered by OrPATS

**ASD Program Self-Assessment and Action Plan**

*Developed by the Oregon Commission on Autism Spectrum Disorders*

**Implementation Collaboration:**
- Oregon Department of Education
- Oregon Program Autism Training Sites and Supports (OrPATS)
- Oregon Regional Programs

A copy of the Self-Assessment and Action Plan and Oregon Guidelines are available at www.sa.orpats.org
On-line ASD Program Self-Assessment and Action Plan

- Conduct a Program Self-Assessment to help identify training/resource needs
  - Assesses level of implementation
  - Identifies priority training/resource needs
  - Team develops an Action Plan
- On-line system provides assessment reports
- A copy of the Self-Assessment protocol is available at sa.orpats.org (click “About Us”)
- Logins for the Online Assessment are available by e-mailing information@orpats.org
- Demonstration of the System

Fall OrPATS Workshops

- The following workshops for instructional staff are being offered in collaboration with each of the eight Oregon Regional Programs:
  - Implementing evidence-based strategies for pre-school/elementary students
  - Implementing evidence-based strategies for secondary/post-secondary students
  - Implementing a parent training program for early childhood students
  - Providing support to general education staff
- Workshop dates/times/locations are being posted to the Orpats.org website and most regional program websites.
- Release time reimbursement funds are available through OrPATS to attend these workshops

Consistent Themes from the Research

- Importance of Early Intervention
- Sufficient Intensity
- Positive Behavior Intervention and Supports
- Family Involvement and Parent Education
- Curriculum Content Appropriate
- Staff Training • Fidelity • System wide
- Interventions matched to Learner Characteristics

Parent Involvement

National Autism Center (2009):
“The values and preferences of parents, care providers, and the individual with ASD should be considered.”

National Research Council (2004):
Characteristics of effective interventions include “inclusion of a family component, including parent training.”

References