

Autism Spectrum Disorders

Research, Training and Best Practices



COSA Conference
October 2014
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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

Critical Life Long Goals

(Oregon Regional Programs Autism Working Group)

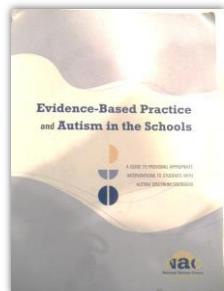
- To tolerate people and value interactions
- To communicate intentionally and effectively
- To organize information and learn meanings/purposes
- To tolerate change and accept new experiences
- To be independent of constant verbal directions
- To self-monitor and manage stress

Effective School Programs Should Use.....

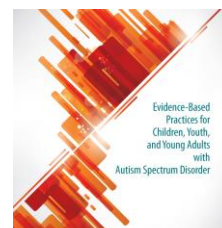
- ✧ Evidence-based Instructional Strategies
 - National Standards Report
 - National Professional Development Center Report
- AND
- ✧ Research-based Curricula

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.



National Professional Development Center Report 2014



Overlap Between Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD and the National Standards Project (NSP)

Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD	Established Treatments Identified by the National Standards Project (NSP)								Comprehensive Behavioral Treatment for Young Children	Joint Attention Intervention
	Antecedent Package	Behavioral Package	Story-based Intervention Package	Modeling	Peer Training Package	Pivotal Response Treatment	Schedules	Self-Management		
Prompting	X			X						
Antecedent-Based Intervention	X									
Time delay	X									
Reinforcement		X								
Task analysis		X								
Discrete Trial Training		X								
Functional Behavior Analysis		X								
Functional Communication Training		X								
Response Interference/Redirection		X								
Differential Reinforcement		X								
Social Narratives			X							
Video Modeling				X						
Naturalistic Interventions					X					
Peer Mediated Intervention						X				
Pivotal Response Training							X			
Visual Supports								X		
Structured Work Systems									X	
Self-Management									X	
Parent Implemented Intervention	The NSP did not consider parent-implemented intervention as a category of evidence-based practice. However, 24 of the studies reviewed by the NSP under other intervention categories involve parents implementing the intervention.									
Social Skills Training Groups	Social Skills Training Groups (Social Skills Package) was identified as an emerging practice by the NSP.									
Speech Generating Devices	Speech Generating Devices (Augmentative and Alternative Communication Devices) was identified as an emerging practice by the NSP.									
Computer Aided Instruction	Computer Aided Instruction (Technology-based Treatment) was identified as an emerging practice by the NSP.									
Picture Exchange Communication	Picture Exchange Communication System was identified as an emerging practice by the NSP.									
Extinction	Extinction (Reductive Package) was identified as an emerging practice by the NSP.									

National Standards Report: 11 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.

www.nationalautismcenter.org

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 consequence
 - 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.

National Standards Report Established Treatment

Comprehensive Behavioral Treatment

0-9 age range

Applied Behavior Analysis
Young Children (under 8)
Early Intensive Behavioral Intervention

Examples:
Discrete Trial Training
Incidental Teaching

National Standards Report Established Treatment

Antecedent Package

3-18 age range

ABA
Behavioral Psychology
Positive Behavior Supports

Examples:
Cueing and prompting
Errorless learning
Environmental modifications

National Standards Report 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

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National Standards Report Established Treatment

Comprehensive Behavioral Treatment (Progress video)

Antecedent Package (Sandwich video)

Behavioral Package (Behavior video)

Video Examples



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National Standards Report 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

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National Standards Report Established Treatment

Pivotal Response Training (Imitation Spontaneous Video)

Video Examples



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National Standards Report 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

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National Standards Report Established Treatment

Schedules (Level II Transition Video)

Video Examples



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National Standards Report Established Treatment

Self-management

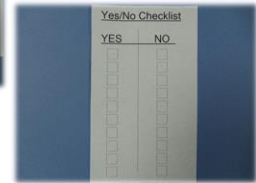
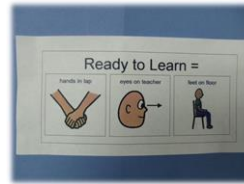
3-18 age range

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

Examples:
Checklists
Wrist counters
Visual Prompts

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Self-Management



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National Standards Report Established Treatment

Peer Training Packages

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

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National Standards Report Established Treatment

Joint Attention

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

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National Standards Report Established Treatment

Modeling

3-18 age range

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

Live modeling
Video modeling

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National Standards Report Established Treatment

Peer Packages (Peer-Computer Video)

Joint Attention

Self-Management

Modeling

Video Examples



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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

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National Standards Report Established Treatment

Naturalistic Teaching Strategies (FR-Play with Adult)

Video Examples



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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"

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National Standards Report Summary

11 Established Treatments

21 Emerging Treatments

Comprehensive behavioral packages have the most evidence.

www.nationalautismcenter.org

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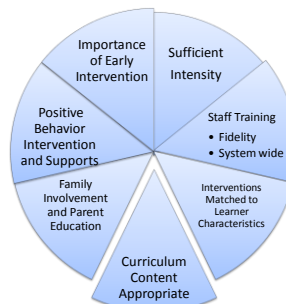
Evidence-Based Treatments

Ideas for School Programs



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Consistent Themes from the Research



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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

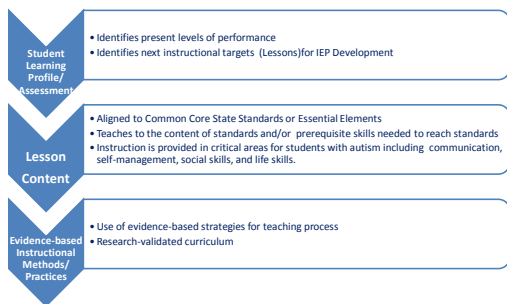
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Importance of Functional Routines

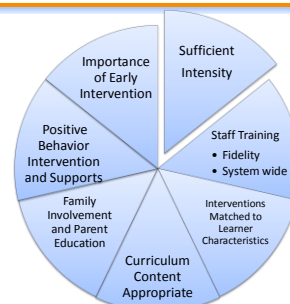
- Links skill acquisition to a functional outcome (Common Core State Standards)
- Focuses on access to the general education curriculum
- Teaches independence

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



Consistent Themes from the Research



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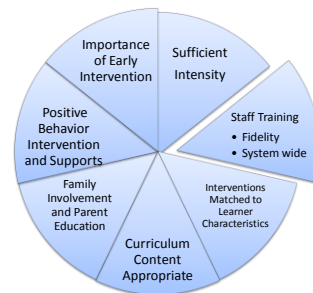
Intensity of Instructional Time

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.

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Consistent Themes from the Research



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STAFF Training

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



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OrPATS:

Oregon Program Autism Training Sites and Support

Current ORPATS STAFF:

- | | |
|------------------------|-----------------------------|
| • Joel Arick, PhD | John Gill, M.S. |
| • Jennie Willis, M.S. | Misten Daniels, M.S. |
| • Darby Lasley, M.S. | Jenny Workman, M.S. |
| • Brenda Nakada, M.Ed. | Kara Magee-Arick, M.S. BCBA |
| • Karen Shepherd, M.S. | |

Parent Training Project:

- Brenda Nakada

General Education-HFA Project

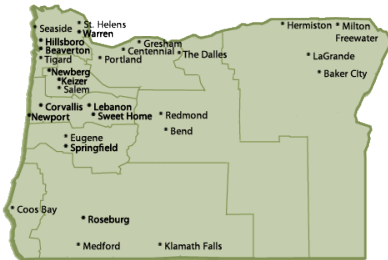
- Lauren Loos, M.S and Sheila Magee, M.S.

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

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Oregon Program Autism Training Sites and Support



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Oregon Statewide Training Network OrPATS

- ❖ 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.**

www.orpts.org

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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.orpts.org



Oregon Commission on ASD



Oregon Program Autism Training Sites and Support



Department for
Education

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

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On-line Self-Assessment and Action Plan (www.sa.orpats.org)

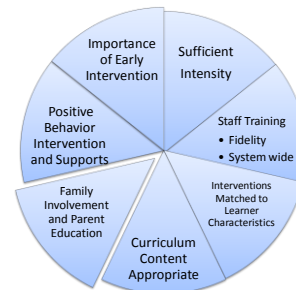
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Fall OrPATS Workshops

- ✦ 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

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Consistent Themes from the Research



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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."



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