NPDC on ASD: Working with States to Increase the Use of Evidence-Based Practices for Young Children with ASD

Cox, A. W., & Kucharczyk, S. (2010, August). NPDC on ASD: Working with states to increase the use of evidence-based practices for young children with ASD. Presentation at the Arlington, VA.
Overview of Topics

• Introduction to National Professional Development Center on Autism Spectrum Disorders (NPDC on ASD)
• State level capacity building and sustainability
• Products and Resources
• Use of evidence-based practices: Work with local sites/classrooms
• Coaching Process
National Professional Development Center on Autism Spectrum Disorders

A multi-university center to promote use of evidence-based practice for children and adolescents with autism spectrum disorders

- FPG Child Development Institute, University of North Carolina at Chapel Hill
- M.I.N.D. Institute, University of California at Davis Medical Center
- Waisman Center, University of Wisconsin at Madison
# Center Staff

<table>
<thead>
<tr>
<th>FPG Child Development Institute Univ. of NC-Chapel Hill</th>
<th>M.I.N.D. Institute Univ. of CA-Davis Medical Center</th>
<th>Waisman Center Univ. of WI-Madison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sam Odom, PI</td>
<td>Sally Rogers, Co – PI</td>
<td>Len Abbeduto, Co – PI</td>
</tr>
<tr>
<td>Ann Cox, Director</td>
<td>Sally Ozonoff, Co – PI</td>
<td>Linda Tuchman-Ginsberg, Co – PI</td>
</tr>
<tr>
<td>S. Kucharczyk</td>
<td>L. Sullivan</td>
<td>E. Franzone</td>
</tr>
<tr>
<td>E. Shaw</td>
<td>A. Stabel</td>
<td>K Szidon</td>
</tr>
<tr>
<td>M. Brock</td>
<td>L. Vismara</td>
<td>L. Collet-Klingenberg</td>
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<tr>
<td>G. Van Ark</td>
<td>A. Mastergeorge</td>
<td>T. Henning</td>
</tr>
<tr>
<td>C. Sidor</td>
<td>D. Hatten</td>
<td>J. Shears</td>
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<tr>
<td>B. Smith-Myles</td>
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</table>
Goals of the National Center?

• Promote development, learning, and achievement of children with ASD and support families through use of evidence-based practices
• Increase state capacity to implement evidence-based practices
• Increase the number of highly qualified personnel serving children with ASD
State Involvement to Date

- **Cohort 1**: CA, NM, TX
- **Cohort 2**: MN, WI, MI, IN
- **Cohort 3**: KY, VA
- **Cohort 4**:
Site Descriptions (since 2007)

• 9 states
• 48 model/expansion sites
  ▪ 10 preschools
  ▪ 17 elementary schools
  ▪ 11 middle schools
  ▪ 10 high schools
• Breakdown by type of program
  ▪ 51% are self-contained programs
  ▪ 49% are inclusive programs
Emphasis of Our Work

Capacity Building & Sustainability
State level

Use of Evidence-Based Practices
School/program level
Working in Partnership With States
Features of State Partnerships

• Systems-focused
  ▪ Involve key stakeholders in state
  ▪ Share resources, identify needs

• Strategic
  ▪ Based on need
  ▪ Clear benchmarks during 2-year involvement

• Sustainable
  ▪ Build network of high quality programs and professionals
  ▪ Give states tools to continue
NPDC 2- Year Cycle

Year 1 State Capacity Building
application development, IAPG formed, strategic plan, model sites confirmed, Autism Training Team completes training

Model Sites
program quality
use of EBP
parent involvement
collaborative coaching

Year 1 and 2
Model and Expansion Site Development
Use of Evidence-Based Practices

Expansion Sites
program quality
use of EBP
parent involvement
collaborative coaching

Year 2 Sustainability
strategic plan updated; leadership shift; state ownership of process, materials, further expansion, training, and coaching
Interagency Autism Planning Group (IAPG)

- Consists of key stakeholders in state
- Complete needs assessment (if undone)
- Develop strategic work plan
- Monitor strategic work plan
Strategic Planning
Sometimes it Gets Messy!
**Now That is Better**

**VIRGINIA STRATEGIC PLANNING SHEET YEAR 1**

OUTCOME A: Confirm Virginia’s Yr. 1 model demonstration sites and age span for sites, identify potential Yr. 2 expansion sites, and outline pre-training activities

<table>
<thead>
<tr>
<th>Activities (in sequence)</th>
<th>Next Steps</th>
<th>Resources Needed</th>
<th>Person(s) Involved</th>
<th>Timeline</th>
<th>Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to address this outcome, we will implement the following activities:</td>
<td>To address, the following steps need to be addressed:</td>
<td>To accomplish our activity, we will need the following:</td>
<td>Who needs to be involved to move the activity forward?</td>
<td>When will this activity be completed?</td>
<td>What will we have accomplished if the activity/step is successful?</td>
</tr>
<tr>
<td>1. Roles and responsibilities of model demonstration sites identified and circulated to state liaison and others.</td>
<td></td>
<td>NPDC staff VA staff</td>
<td>January 2010 Done</td>
<td>Description of roles and responsibilities of model demonstration sites develop by NPDC staff and shared with state liaison and site coordinator</td>
<td></td>
</tr>
<tr>
<td>2. Autism Training Team membership reviewed and finalized.</td>
<td>present and discuss at strategic planning meeting finalise with VA liaisons</td>
<td>IAPG VA staff NPDC staff</td>
<td>Feb 2010 Done</td>
<td>A Team: - Model site members - TA providers - Other T-TAC - Others to be brought in as needed</td>
<td></td>
</tr>
<tr>
<td>3. Yr. 1 model sites identified and confirmed.</td>
<td>present and discuss at strategic planning meeting</td>
<td>IAPG</td>
<td>Feb 2010</td>
<td>Richmond site - Miles Jones Elem School Loudon site 2 Wise site - Powell Valley Primary</td>
<td></td>
</tr>
<tr>
<td>4. Model site coordinator reviews and obtains signatures for site agreement. agreements sent and received</td>
<td>VA liaison to send NPDC site agreement to local contact for</td>
<td>Contact information Blank agreements VA liaison Model site contact NPDC staff</td>
<td>March 2010</td>
<td>Signed agreements received</td>
<td></td>
</tr>
</tbody>
</table>

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON AUTISM SPECTRUM DISORDERS
Autism Training Team

• Defined: a group of state individuals who will participate in and provide the training and coaching during the 2-years and ongoing after NPDC work with state ends
  ▪ State TA Providers and Model Site Team Members
  ▪ Receive training from NPDC – Year 1 – online course, summer institute, webinars, materials
  ▪ Offer training and participate in coaching
  ▪ Provide training in Year 2 to new sites and ongoing
Year 2 Leadership Shift

- Purposeful and defined
- NPDC *drives the truck* with state as *navigator* – Year 1

- State *drives* the trucks in the convoy; NPDC serves as *support team* – Year 2
## Shift in Leadership – Year 2

### YEAR 1

<table>
<thead>
<tr>
<th>Role of NPDC on ASD</th>
<th>Role of State</th>
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<tbody>
<tr>
<td>Conduct strategic planning</td>
<td>Identify/convene stakeholders</td>
</tr>
<tr>
<td>Provide training/resources</td>
<td>Receive training, provide resources</td>
</tr>
<tr>
<td>Implement NPDC model</td>
<td>Identify program level participants</td>
</tr>
<tr>
<td>Evaluate outcomes and reports to State</td>
<td>Provide feedback, collect &amp; report data</td>
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</tbody>
</table>

### YEAR 2

<table>
<thead>
<tr>
<th>Role of NPDC on ASD</th>
<th>Role of State</th>
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</thead>
<tbody>
<tr>
<td>Support strategic plan update</td>
<td>Update strategic plan</td>
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<tr>
<td>Provide materials to support training</td>
<td>Provide training/resources</td>
</tr>
<tr>
<td>Provide forms/tools/instruments</td>
<td>Implement NPDC model</td>
</tr>
<tr>
<td>Provide online data entry features and feedback</td>
<td>Evaluate outcomes and reports to NPDC</td>
</tr>
</tbody>
</table>
Products & Resources

To Support State & Site Level Work
Evidence-Based Practices

- Antecedent-based interventions
- Computer-aided instruction
- Differential reinforcement
- Discrete trial training
- Extinction
- Functional behavior assessment
- Functional communication training
- Naturalistic interventions
- Parent-implemented intervention
- Peer-mediated instruction/intervention
- Picture Exchange Communication System™

- Pivotal response training
- Prompting
- Reinforcement
- Response interruption/redirection
- Self-management
- Social narratives
- Social skills training groups
- Speech generating devices
- Structured work systems
- Task analysis
- Time delay
- Video modeling
- Visual supports
## Practices by Age and Domain

<table>
<thead>
<tr>
<th>Evidence-Based Practices</th>
<th>Academics &amp; Cognition</th>
<th>Behavior</th>
<th>Communication</th>
<th>Play</th>
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Products & Resources

- Evidence-based practices briefs (available on NPDC website: [http://autismpdc.fpg.unc.edu](http://autismpdc.fpg.unc.edu))
- Online modules on evidence-based practices (available on [www.autisminternetmodules.org](http://www.autisminternetmodules.org))
- Autism Program Environment Rating Scale (APERS)
- Goal Attainment Scaling Process
- NPDC Online Course
- Coaching Manual
Evidence-Based Practice Briefs

http://autismpdc.fpg.unc.edu/content/briefs

Briefs consist of:

- Overview of Practice
- Evidence-base for Practice
- Steps for Implementation
- Implementation Checklist
- Data Collection Forms
Evidence-Based Practice Briefs

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON AUTISM SPECTRUM DISORDERS

A multi-university center to promote the use of evidence-based practice for children and adolescents with autism spectrum disorders

Home
About the Center »
Evidence-Based Practices »
Additional Resources »
State Application »

Autism Internet Modules

EBP Briefs

Each year, three states are selected through a competitive application process for a two-year partnership with the Professional Development Center.

Learn more about the application process >>

The National Professional Development Center on Autism Spectrum Disorders is a multi-university center to promote the use of evidence-based practice for children and adolescents with autism spectrum disorders. The Center operates through three sites that include the FPG Child Development Institute at the University of North Carolina at Chapel Hill, the M.I.N.D. Institute at University of California at Davis Medical School, and the Waisman Center at the University of Wisconsin at Madison. Each year, three states are selected through a competitive application process for a two-year partnership with the Professional Development Center. The Center works in coordination with each state’s Department of Education, Part C agency, and University Center for Excellence in Developmental Disabilities to provide professional development to teachers and practitioners who serve individuals from birth through twenty-two years with autism spectrum disorders.

NEWs AND EVENTS

New COP Discussion Forum
PRT online module now available

STATE Partners Login
User name:
Password:
Log In
Need login help?
Evidence-Based Practice: Picture Exchange Communication System

Overview of Picture Exchange Communication System (PECS)

The Picture Exchange Communication System (PECS) was developed at the Delaware Autism Program (DAP) and was designed to teach young children to communicate in a social context (Bondy & Frost, 1994; Frost & Bondy, 2002). Using PECS, learners are taught to give a picture of a desired item to a communicative partner in exchange for the item. There are six phases of PECS instruction, with each phase building on the last. The phases are: (1) Teaching the physically assisted exchange, (2) Expanding spontaneously, (3) Simultaneous discrimination of pictures, (4) Building sentence structure, (5) Responding to, “What do you want?” and (6) Commenting in response to a question.

Evidence

Five studies were found to meet the evidence-based practice criteria and serve as the evidence base for PECS. Two of the studies were randomized, controlled group designs, and three were single subject studies demonstrating control through a variety of research designs including multiple baseline, alternating treatments, changing criterion, and withdrawal.

With what ages is PECS effective?

In the five studies documenting the evidence base for PECS, the youngest child was three years of age, and the oldest was twelve years old. Specific numbers of participants and age data can be found in the evidence base below.

What skills or intervention goals can be addressed by PECS?

In the evidence-base, communication, social, and behavior skills were the primary targets for intervention.

In what settings can PECS be effectively used?

The research evidence suggests that PECS can be used in multiple settings, including schools, homes, and therapy settings.

Brief Package:

- PictureExchangeCommunication_Brief.pdf [PDF, 210306KB]

Brief Components

- Overview:
  - PictureExchangeCommunication_Overview.pdf [PDF, 85751KB]
- Evidence base:
  - PictureExchangeCommunication_EvidenceBase.pdf [PDF, 80077KB]
- Steps for Implementation:
  - PictureExchangeCommunication_Steps.pdf [PDF, 97677KB]
- Implementation Checklist:
  - PictureExchangeCommunication_Checklist.pdf [PDF, 149936KB]
Evidence-Based Practice Online Modules

http://www.autisminternetmodules.org/

• Narrative content with video examples of practices being implemented
• Includes downloadable EBP brief components
• Pre/ Post knowledge assessment
• Case study examples
• Learning activities, Discussion questions
http://www.autisminternetmodules.org/

Welcome

The Autism Internet Modules were developed with one aim in mind: to make comprehensive, up-to-date, and usable information on autism accessible and applicable to educators, other professionals, and families who support individuals with autism spectrum disorders (ASD). Written by experts from across the U.S., all online modules are free, and are designed to promote understanding of, respect for, and equality of persons with ASD.

To get started please log in, or if you're a new user sign up to create an account.

HIGHLIGHTED MODULES

Time Delay

Time delay is a response-prompting procedure that focuses on fading the use of prompts during instructional activities. This module will provide information on time delay.
Alphabetical Module List

Current Modules (17)

- Assessment for Identification
- Home Base
- Peer-Mediated Instruction and Intervention (PMII)
- Picture Exchange Communication System (PECS)
- Pivotal Response Training (PRT)
- Preparing Individuals for Employment
- Reinforcement
- Restricted Patterns of Behavior, Interests, and Activities
- Self-Management
- Social Supports for Transition-Aged Individuals
- Structured Teaching
- Structured Work Systems and Activity Organization
- Supporting Successful Completion of Homework
- The Incredible 5-Point Scale
- Time Delay
- Transitioning Between Activities
- Visual Supports

Upcoming Modules (52)

- Accessing Community Supports
- Antecedent-Based Interventions (ABI)
- Applied Behavior Analysis - An Overview
- ASD and the Legal System
- Assessment for Intervention
- Assessment, Screening, and Diagnostic Instruments
- Behavior Intervention Plans
- Bullying
NPDC 2- Year Cycle

**Year 1 State Capacity Building**
application development, IAPG formed, strategic plan, model sites confirmed, Autism Training Team completes training

**Model Sites**
- program quality
- use of EBP
- parent involvement
- collaborative coaching

**Expansion Sites**
- program quality
- use of EBP
- parent involvement
- collaborative coaching

**Year 1 and 2**
Model and Expansion Site Development
Use of Evidence-Based Practices

**Year 2 Sustainability**
- strategic plan updated; leadership shift; state ownership of process, materials, further expansion, training, and coaching
Processes at the Site Level

• Summer Institute team learning & planning
• Assessing program quality: Autism Program Environment Rating Scale (APERS)
• Goal Attainment Scaling (GAS)
• Choosing evidence based practices (EBP)
• Coaching by technical assistance providers: program quality improvement and implementation of EBP
Coaching Process
# Training Outcomes Related to Training Components

<table>
<thead>
<tr>
<th>Training Components</th>
<th>Knowledge of Content</th>
<th>Skill Implementation</th>
<th>Classroom Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation/Lecture</td>
<td>10%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Plus Demonstration in Training</td>
<td>30%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>Plus Practice in Training</td>
<td>60%</td>
<td>60%</td>
<td>5%</td>
</tr>
<tr>
<td>Plus Coaching/Admin Support Data Feedback</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Joyce & Showers, 2002
Coaching

• Participants
  ▪ Inviting partner
  ▪ Coach

• Three Types
  ▪ Mentor
  ▪ Peer
  ▪ Reflective consultation
Mentor Coaching

- Coach shares knowledge, expertise and guidance with the IP
- Coach provides direction in
  - Defining the target behaviors
  - Targeting evidence-based practice for IP
  - Identifying data collection method
  - Interpreting IP performance
Peer Coaching

- Each member coaches the other
- Inviting partner role
  - Selects and defines coaching target and data collection
- Coach role
  - Is nonauthoritarian
  - Guides IP to identifying coaching targets
  - Offers nonjudgmental comments
  - Promotes reflection in the IP
Reflective Consultation

- Variation of coaching relationship
- Administrator/supervisor supports mentor/peer coach
- Provide opportunity for coach to reflect upon their own practice
- Utilize questioning and reflective listening in order to develop an action plan to improve coaching practices
- Model for relationship between NPDC & TA
3 Components Of Cyclical Coaching Process

Preobservation Conference
Select coaching target, obs plan, data collection plan

Observation
Collect data for meaningful discussion and planning

Postobservation Conference
Discuss obs, discuss ways to change behavior, plan for ongoing support

Feedback & Support from NPDC
## Coaching Log

### Coaching Log Form

- **Inviting Partner:** [Blank]
- **Coach:** [Blank]
- **EBP/GAS/Program Target:** [Blank]
- **Lesson:** [Blank]

#### Pre Observation Conference

<table>
<thead>
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<th>Date:</th>
<th>FOCUS / CONCERN:</th>
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<tbody>
<tr>
<td>Time:</td>
<td></td>
</tr>
<tr>
<td>During:</td>
<td></td>
</tr>
<tr>
<td>Length:</td>
<td></td>
</tr>
<tr>
<td>Setting:</td>
<td></td>
</tr>
</tbody>
</table>

### Observable Behavior

- **ADULT:** [Blank]
- **STUDENT:** [Blank]

#### Data Collection Method

- **ADULT MASTERY CRITERION:** [Blank] %
- **MAINTENANCE CRITERION:** [Blank] TIMES

#### Observation

<table>
<thead>
<tr>
<th>Date:</th>
<th>FOCUS / CONCERN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time:</td>
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<tr>
<td>Length:</td>
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<td>Setting:</td>
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### Notes for Discussion

#### Post Observation Conference

<table>
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<tr>
<th>Date:</th>
<th>MASTERY ACHIEVED:</th>
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<tbody>
<tr>
<td>Time:</td>
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<td>Length:</td>
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<tr>
<td>Setting:</td>
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</tr>
</tbody>
</table>

### Communication Skills Reminders

- Reflects partner's words
- Uses open questions
- Reflects partner's words
- Clarifies words and feelings
- Takes turns, no interrupting
- Uses encouragement

### Future Plans / Notes

### Notes: [Blank]
NPDC on ASD: Summary

• Funded by OSEP: 2007-2012
• Works at *both* the state and classroom level to:
  - increase state capacity to implement evidence-based practices
  - increase the number of highly qualified personnel serving children with ASD
  - promote development, learning, and achievement of children with ASD and support families through use of evidence-based practices
NPDC on ASD Summary

• Multi-university collaboration
• Now working in 9 states; soon to add 3 more
• Identified evidence-based practices
  ▪ Developed EBP briefs:
    http://autismpdcdc.fpg.unc.edu
  ▪ Posted online EBP modules:
    www.autisminternetmodules.org
• Developed resources: Online course, GAS, etc.
• Train and model coaching in classrooms as our delivery process
Questions and Discussion