Promoting Evidence-Based Practices for Preschool Children with ASD

Objectives for Presentation

Participants attending this session will be able to:

• explain how the NPDC on ASD addresses its goals,
• discuss the use of the APERS for identifying quality indicators of programs for students with ASD,
• identify practices for which there is evidence of efficacy for young children with ASD
• discuss how evidence-based practices are selected to address the goals of young children with ASD.
Who are we?
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.
Collaborative Sites

• 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
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
What do we do?
Bridge the Gap

Replicable practices in the classroom

Research-based practices
Four Areas of our Work

- Professional Development
- Technical Assistance
- Evaluation
- Content Development
Content Development

- Identify/define criteria for evidence
- Identify evidence-based practices
- Develop online introductory course on ASD
- Develop briefs/modules on evidence-based practices
- Develop content of summer institute
Professional Development

• Offer online foundational course
• Conduct intensive 5-day training institute
• Use briefs/modules on evidence-based practices for training
• Provide training/coaching on implementation of evidence-based practices
• Make modules and briefs available for the public online through OCALI and on NPDC website
Evidence-Based Practice Briefs

Briefs consist of:

- Overview of Practice
- Evidence-base for Practice
- Steps for Implementation
- Implementation Checklist
- Data Collection Forms
## Implementation Checklist for Naturalistic Intervention

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### Step 1. Identifying a Target Act

1. Teachers/practitioners select a specific target act/skill to be the focus of intervention that:
   - focuses on prelinguistic or linguistic communication and/or
   - social skills.

2. Teachers/practitioners confirm that the target act is in the learner’s IEP or IFSP.

### Step 2. Collecting Baseline Data

1. Prior to intervention, teachers/practitioners determine the learner’s current use of the target skill.

2. Teachers/practitioners take data on the target skills a minimum of three times in more than one environment.

**Scoring Key:** 2 = implemented; 1 = partially implemented; 0 = did not implement; NA = not applicable
Evidence-Based Practice Online Modules

- Includes downloadable EBP brief components
- Pre/Post knowledge assessment
- Content on practice with video examples of practice being implemented
- Case study examples
- Learning activities, Discussion questions
HOME > Peer-Mediated Instruction and Intervention (PMII) for Children with Autism Spectrum Disorders > Who Can Use PMII and How Does it Work?

WHO CAN USE PMII AND HOW DOES IT WORK?

WHO CAN USE PMII?

This approach can be used by a variety of professionals including teachers, special educators, therapists, and classroom assistants in different educational and community-based environments.

WHO WOULD BENEFIT MOST FROM PMII?

PMII is most useful for children and youth with ASD who have limited communication skills, who rarely initiate or respond to social interactions with peers, and who do not appear to be benefiting from group instruction. For these learners with ASD, the persistent social initiations from peers will increase social responding, sometimes increase social initiations, and heighten their social engagement. For children and youth with ASD who have communication skills (i.e., can express their needs to adults and understand verbal instructions), social skills training groups that involve both focal children and peers may be more effective. For middle school-aged and high school-aged students with ASD, social networking groups may be more appropriate.

HOW DOES IT WORK?

Peer-mediated interventions are based on principles of behaviorism and social learning theory (Bandura, 1977). Peers are carefully and systematically taught ways of engaging children and youth with ASD in positive and extended social interactions in both teacher-directed and child-initiated activities (English et al., 1997; Odom et al., 1996; Strain & Odom, 1986). Peer-mediated interventions are beneficial for children and youth with ASD because they increase the likelihood that learners with ASD will generalize new social skills to different activities and with different peers that were not involved in the initial training and intervention (Rogers, 2000). This is particularly important given the difficulty that individuals with ASD have generalizing the use of skills to new situations and to different people.

Content for this module was developed by The National Professional Development Center On Autism Spectrum Disorders
VIDEO EXAMPLES

The first two videos should be viewed after completing the content for Steps 1 and 2. The third video should be viewed after completing the content for Step 5.

MOVIE: PEER INITIATION TRAINING SESSION

Play Movie | Stop Movie | Skip Movie Back | Skip Movie Forward | Start Movie Over

MOVIE TRANSCRIPT

Adult: "What's your name?"

Sam: "Sam"

Adult: "Sam, and what is your name?"
Technical Assistance

- Complete state strategic plan
- Develop model sites
- Monitor onsite training/coaching/mentoring
- Facilitate cross-state/site communication
Evaluation

• Content
• Professional development
• Technical assistance
• Outcomes
  - Child – Goal Attainment Scaling
  - Family – Family Program Questionnaire
  - Practitioner - EBP Inventory
  - Program - APERS
Working With Model Sites
How do we Work With Model Sites?

• Assist sites document their program strengths and needs
• Tie student outcomes to IEP goals
• Select EBP based on:
  ▪ student goals, strengths, and interests
  ▪ history of what has worked in the past
  ▪ teacher/staff knowledge and experience
• Monitor progress
Assessment ➔ Implementation ➔ Outcomes

- Program Quality (APERS)
- Learner Goals and Present Levels (IEP)
- Learner Strengths, Interests, and History
- Teacher Experience and Knowledge

Selection and Implementation of Evidence Based Practices

- Program Quality (APERS)
- Student Progress (GAS)
Program Quality Indicators, Students Goals, and Evidence Based Practices
Program Quality Indicators and Evidence-Based Practices (EBP)

Program Quality

- Contextual features of the program that represent best practices
- Program quality as the house in which practices are employed
Program Quality Indicators and Evidence-Based Practices (EBP)

EBP

- Evidence-based practices as specific tools for specific skills
- EBP as the furniture or appliances designed for specific functions
Autism Program Environment Rating Scale (APERS)

• Designed to assess *quality indicators of programs* for children and youth with ASD

• Purposes of the APERS
  ▪ Program evaluation
  ▪ Consultation
  ▪ Self-evaluation
  ▪ Professional development
Classroom Environment
Interdisciplinary Teaming
Program Ecology
- Classroom Environment
- Structure & Schedule
- Classroom Climate
- Curriculum & Instruction
- Communication
- Social Relationships
- Independence
- Functional Behavior
- Assessment
Family Participation
Program Quality
Learner Outcomes

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON AUTISM SPECTRUM DISORDERS
How Do We Collect This Information?

• Observation in program across the school day
  ▪ For inclusive programs with more than one class, observe two students for three hours each

• Review IEP

• Interview teacher(s)

• Interview parent(s)

• Interview team member or another staff member
Features of APERS

• Two APERS formats: PS/ELE; MHS
• Organized by domains and subdomains
• Applicable in self-contained and inclusive programs
• Scored on a five-point scale with behavioral anchors at three points
• Results can be summarized by scores or graphs
Preschool/Elementary APERS

- For self-contained and inclusive environments
- Consists of 11 domains
- 64 items
- Data collected by:
  - 3 hour observation and
  - by interviews with teacher, team member, and parent
PS/ELE APERS Domains

- Classroom Environment
- Class Structure/Schedule
- Positive Classroom Climate
- Assessment
- Curriculum and Instruction
- Communication
- Staff/Peer Relationships
- Personal Independence and Competence
- Functional Behavior
- Family Involvement
- Teaming
How can we use the APERS?

• Create a profile that is useful for understanding program quality
• Identify strengths and needs of programs
• Target domains/sub-domains to enhance program improvement
• Strengthen overall program

One needs a strong “house” (program) in which to implement EBP
Autism Program Environment Rating Scale

APERS Profile by Domain

- Classroom Environment: Exemplary
- Class Structure/Schedule: Adequate
- Positive Classroom Climate: Adequate
- Assessment: Adequate
- Curriculum and Instruction: Adequate
- Communication: Inadequate
- Staff/Peer Relationships: Inadequate
- Personal Ind./Competence: Inadequate
- Functional Behavior: Adequate
- Family Involvement: Exemplary
- Teaming: Adequate
- Overall Score: Adequate

The National Professional Development Center on Autism Spectrum Disorders
From IEP Goals to Evidence-Based Practices
Student’s IEP Goals

• Review student’s IEP Goals with teacher/parents
• Identify 3 priority goals for each target student
• Engage in Goal Attainment Scaling for each of these goals
• Monitor progress on meeting or exceeding goals
• Make modifications as needed
Assessment for Examining Children’s Goals: Goal Attainment Scale (GAS)

- Goal Attainment Scale (GAS) is designed to document progress on goal, objective, and benchmark.
- Has a long history in fields of mental health, education, geriatric care.
- Provides a summative rating to evaluate outcomes of programs.
- May or may not be detailed enough for progress monitoring.
Description of GAS

• Establish a five point range of performances for students:
  ▪ Much less than expected (-2)
  ▪ Somewhat less than expected (-1)
  ▪ Expected level of outcome (0)
  ▪ Somewhat more than expected (1)
  ▪ Much more than expected (2)
How to Develop a GAS

• Select learning objective/benchmark with a defined continuum of outcomes.
• Identify outcomes that reflect the five points on the continuum noted.
• Identify the current level of performance.
• Use the continuum to evaluate growth on a designated schedule (monthly, bimonthly).
• Use GAS to determine final outcome at end of learning period (end of the year).
How to Develop a GAS

-2 When the timer goes off, E.J. transitions with a full physical prompt between activities within the classroom 4 out of 5 opportunities weekly.

-1 When the timer goes off, E.J. will transition with a partial physical prompt between activities within the classroom 4 out of 5 opportunities weekly.

0 When the timer goes off, E.J. will transition independently between activities within the classroom 4 out of 5 opportunities weekly.

+1 When the timer goes off, E.J. will transition independently between activities outside the classroom 4 out of 5 opportunities weekly.

+2 When the timer goes off, E.J. will transition independently between both the classroom and the playground and the classroom and the lunchroom 4 out of 5 opportunities weekly.
Evidence-Based Practices
What are EBP?

Focused interventions that:

• Produce specific behavioral/developmental outcomes for a child
• Have been demonstrated as effective in applied research literature
• Can be successfully implemented in educational settings

(Odom, Boyd, Hall, & Hume, 2009)
Process Used to Identify EBP

• Identified outcomes related to the core features of autism
• Reviewed literature related to these outcomes as well as the key words autism, ASD, and autism spectrum, limited by age (birth – 21)
• Identified and grouped teaching interventions that addressed these outcomes/domains
• Determined criteria and whether an evidence base supported the practices
NPDC Criteria

To be considered an evidence-based practice:

• Two randomized or quasi-experimental design studies,
• Five single subject design studies by three different authors, OR
• A combination of evidence such a one group and three single-subject studies
Evidence-Based Practices

- 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
- Stimulus control
- Structured work systems
- Task analysis
- Time delay
- Video modeling
- Visual supports
How do we use EBP?

With

students

• Achieving IEP goals
• Developing skills
• Monitoring progress

With

practitioners
& TA providers

• Providing training/fidelity
• Providing technical assistance/coaching
• Monitoring progress
• Measuring outcomes
### Practices by Age and Domain

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How do we Decide Which EBP to Use?

Ask: What is our goal/objective targeting?
  • Consider the specific IEP goals and related objectives

Ask: What are our options?
  • Look at the domain of behavior to which the specific goal relates
## Practices for Early Childhood (2-5)

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Next, make a decision based on:

- The skills being taught
- Your program strengths/needs
- Your professional wisdom
- The learner’s learning style
- The learner’s temperament
- The learner’s interests and motivators
- Supports already in place
- History of what has and has not worked
Example: IEP Application Goal Communication

Goal:
Sam will improve expressive communication skills across the school day.

Related Benchmark:
Sam will request a desired item during snack and/or free choice time three times per day for two consecutive weeks.
Ask: What is the goal targeting?
• Communication/Expressive Language

Ask: What are my evidence-based practice options?
# Evidence-Based Practices for Communication in Early Childhood (2-5)

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Next, make a decision based on:

- Your program strengths/needs
- Your professional wisdom
- The learner’s learning style, temperament, and interests
- Supports already in place
- History of what has and has not worked
Let’s say we know this. . .

• Sam is in an inclusive preschool setting
• Sam is already using pictures for a visual schedule at school
• One of Sam’s classmates uses PECS, and Sam is interested in the pictures
• Sam does not like talking to most people and he is difficult to understand
• Program staff (teachers and assistants) use PECS with fidelity with other students
What Practice Might be a Good Fit for Sam and the Program?

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<thead>
<tr>
<th>Evidence-Based Practices</th>
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What About Goals That Cut Across Domains?

- Matrix still can be helpful
- Consider which domains are involved in addressing the goal
- Align domains, by age grouping, to identify EBP possibilities
- Proceed as before to consider other variables (learner factors, teacher/staff factors, history, etc.) when deciding on EBP
IEP Application Goal: Behavior/Communication

Goal:
Xena will express her frustration with transitioning between activities with pictures rather than by physical aggression.

Related benchmark:
When Xena experiences frustration with moving from one activity to another, she will use picture cards to request help or to take a break.
Let’s say we know this…

• Through the FBA process, the team determined that Xena was using aggression when she became frustrated with moving from activity to activity
• Xena has limited verbal ability
• Xena uses a picture schedule to start her day
## Some EBP Possibilities

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How was Xena’s Goal Addressed?

• Several practices are/were used to address this student’s goal
• Teachers/assistants established fidelity of implementation for the practices chosen
• These included
  ▪ Functional behavioral assessment
  ▪ Visual supports
  ▪ Reinforcement
  ▪ PECS
NPDC Next Steps Related to Evidence-Based Practices

• Continue to review research related to practices that can:
  ▪ Expand application of existing EBP (age and/or domain)
  ▪ Identify new EBP
  ▪ Identify emerging practices

• Develop/refine resources on new and existing EBP

• Share resources with the public
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
State Process

- State convenes group and prepares application
- Interagency Autism Planning Group (IAPG) formed
- Strategic planning meeting held
- YR 1 strategic plan developed, model sites selected
- IAPG updated on progress and plans for YR 2
- Expansion sites selected
- IAPG receives
Who is on the IAPG?

- Department of Education, UCEDD, Part C, other autism-focused organizations, advocacy groups, family members, persons with ASD, TA providers, universities/colleges, district administrators—determined by state leadership
- Role is to provide direction for planning based on state needs and assist with identifying state Autism Training Team and model sites
- Monitor progress
Who is on the Autism Training Team?

- Autism trainers and TA providers in the state
How are States Involved With the NPDC on ASD?
Availability of Resources

• Visit our Website at www.fpg.unc.edu/~autismpd to find:

  www.fpg.unc.edu/~autismpd
to find:

  ▪ Content of online foundational course
  ▪ Evidence-based practice descriptions
  ▪ Evidence-based practice briefs
  ▪ Recent PowerPoint presentations
Evidence-Based Practices are Delicious

- prompting
- reinforcement
- task analysis
- PECS
- parent-implemented intervention
- time delay
- naturalistic interventions
- pivotal response training
- peer-mediated instruction/intervention

**EVIDENCE-BASED PRACTICES**

- functional behavior assessment
- video modeling
- functional communication training
- extinction
- stimulus control
- environmental modifications
- visual supports
- self-management
- social skills training groups
- social narratives
- differential reinforcement
- response interruption/redirection
- structured work systems
- VOCA
- speech generating devices
Questions?