

National Professional Development Center on Autism Spectrum Disorders

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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**



THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS



Cooperative Agreement H 35G 070004
U.S. Department of Education
Office of Special Education Programs

National Professional Development Center on Autism Spectrum Disorders: Sites

- FPG Child Development Institute, University of North Carolina at Chapel Hill
 - FPG : Sam Odom
- Waisman Center, University of Wisconsin at Madison
 - Len Abbeduto and Linda Tuchman-Ginsberg
- M.I.N.D. Institute, University of California at Davis Medical School
 - Sally Rogers, Sally Ozonoff, Peter Mundy



NPDC Conceptual Model

- Program quality and implementation of evidence-based practices (EBP) are related to learning and development
- Professional development can enhance program quality and implementation of EBP
- Consultation and coaching support the program quality and implementation of EBP
- Administrative support necessary for change in programs



Goals of the Center

- Project goals are organized around four content areas:
 1. Content development
 2. Professional development
 3. Technical assistance
 4. Evaluation



Project Goals: Content Development

- Translate information about evidence-based practices into resources for service providers
- Establish and maintain a website



Project Goals: Professional Development

- Provide training to state professional development providers
- Provide training activities to practitioners in participating states
- Establish training sites that model evidence-based practices



Project Goals: Technical Assistance

- Develop outreach program
- Provide ongoing site-based training
- Establish a network of professional development sites, trainees, and national consultants

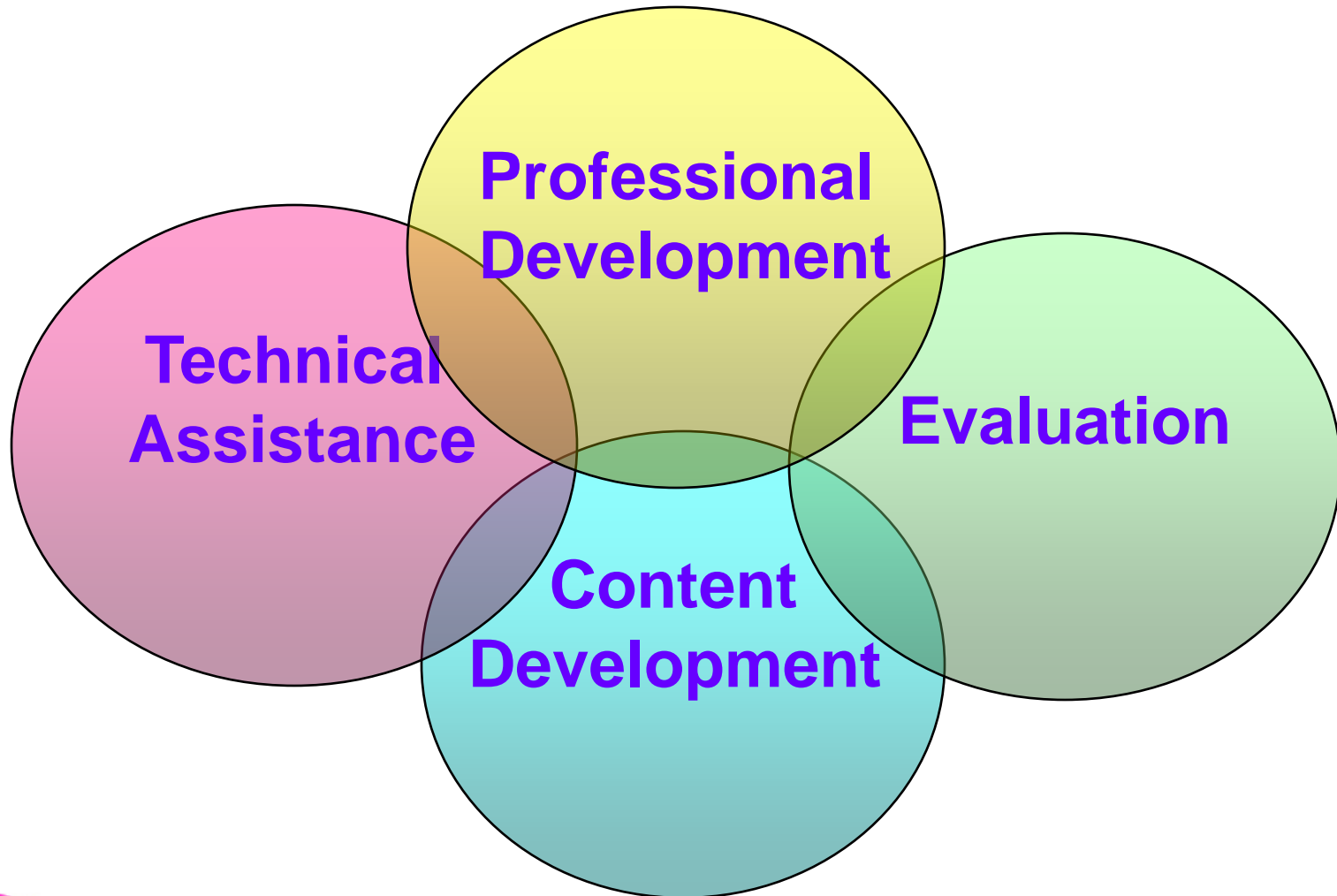


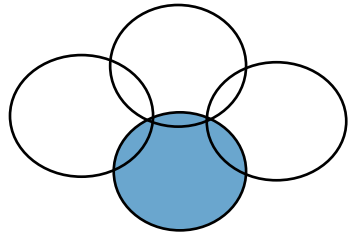
Project Goals: Evaluation

- Assist trainees in establishing a system for implementing EBP
- Collect follow-up data on use of evidence-based practices, practitioner skills, and child and family outcomes



Accomplishment of NPDC Key Activities

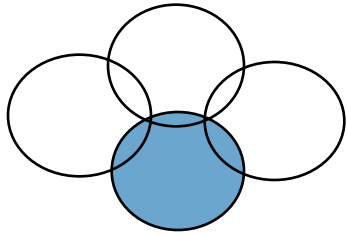




Content Development

- Develop online introductory course on ASD
- Identify/define criteria for evidence
- Identify evidence-based practices
- Develop briefs/modules on evidence-based practices



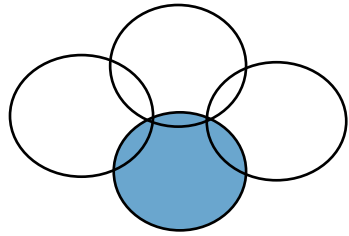


Content Development

Foundations of Autism Spectrum Disorders Online Course

- Eight sessions
- Pre- and post-test for each session
- PowerPoint and narrative formats
- Accessed online using *BlackBoard* platform



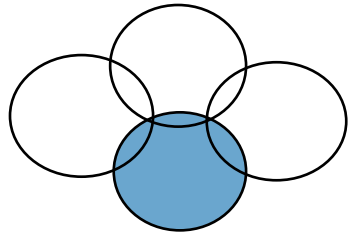


Content Development

Products: Online Introductory Course

- Understanding PDD and ASD
- Characteristics of individuals with ASD
- Assessment
- Guiding principles/recommended practices
- Factors affecting learning and development
- Instructional strategies and learning environments
- Foundation of communication and social interventions
- Promoting positive behavior and reducing interfering behaviors





Content Development

Evidence-Based Practices



Selection of Evidence-Based Practices (EBP)

- Intended to use National Standards Project (NSP) literature review as basis for selecting EBP
- NPDC developed criteria for EBP because NSP report was delayed



Process for Identifying EBP

- Established criteria for selection of research studies
- Established criteria for the level of evidence needed for a practice to be considered evidence-based
- Conducted a thorough literature review
- Selected practices that had sufficient evidence base and practical utility



Definition of EBP

To be considered an evidence-based practice (EBP) by The National Professional Development Center on ASD, efficacy must be established through peer-reviewed research in scientific journals using:

- ***randomized or quasi-experimental design studies.*** Two high quality experimental or quasi-experimental studies,
- ***single-subject design studies.*** Three different researchers must have conducted five high quality single subject design studies, or
- ***combination of evidence.*** One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups.



EBP Criteria

- High-quality randomized or quasi-experimental design studies do not have critical design flaws that create confounds to the studies and have design features that readers/consumers can use to rule out competing hypotheses for study findings.
- High-quality single-subject design studies have no critical design flaws that create confounds and demonstrate experimental control at least three times.



Basis for EBP Definition and Criteria

- Horner, R., Carr, E., Halle, J., McGee, G., Odom, S., & Wolery M. (2005). The use of single subject research to identify evidence-based practice in special education. *Exceptional Children, 71*, 165-180.
- Nathan, P. & Gorman, J. M. (2002). *A guide to treatments that work*. NY: Oxford University Press.
- Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. D., Thompson, B., Harris, K. (2004). *Quality indicators for research in special education and guidelines for evidence-based practices: Executive summary*. Arlington, VA: Council for Exceptional Children Division for Research.
- Rogers, S.J., & Vismara, L.A. (2008). Evidence based comprehensive treatments for early autism. *Journal of Child Clinical Psychology, 37*(1), 8-38.



Evidence Based Practices

- Computer-aided instruction
- Differential reinforcement
- Discrete trial teaching
- Extinction
- Functional behavior assessment
- Functional communication training
- Naturalistic intervention
- Parent-implemented intervention
- PECS
- Peer-mediated instruction and intervention
- Pivotal response training
- Prompting
- Reinforcement
- Response interruption/redirection
- Self-management
- Social narratives
- Social skills groups
- Speech-generating devices
- Stimulus control
- Structured work systems
- Task analysis
- Time delay
- Video modeling
- Visual supports

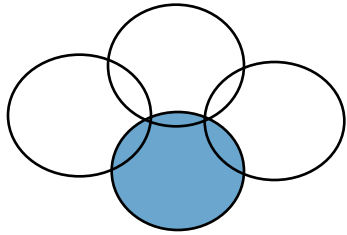


Evidence-based Practice	Early Childhood (2-5 yrs.)	Elementary (6-12 yrs.)	Middle School (13-15 yrs.)	High School (16-21 yrs.)
1. Computer-aided instruction				
2. Differential reinforcement (DRA//O/L)				
3. Discrete trial training (DTT)				
4. Extinction				
5. Functional behavior assessment (FBA)				
6. Functional communication training (FCT)				
7. Naturalistic interventions				
8. Parent-implemented interventions				
9. Peer-mediated instruction/intervention (PMII)				
10. Picture exchange communication system (PECS)				
11. Pivotal response training (PRT)				
12. Prompting				
13. Reinforcement				
14. Response interruption/redirection				
15. Self-management				
16. Social narratives				
17. Social skills training groups				
18. Speech generating devices (SGD)/VOCA				
19. Stimulus control				
20. Structured work systems				
21. Task analysis and chaining				
22. Time delay				
23. Video modeling				
24. Visual supports				

Shading indicates that the studies making up the evidence base for the practice included children and youth from these age groupings.

Disclaimer: The review completed by the NPDC on ASD was not exhaustive. It is possible that yet unidentified evidence exists for practices and ages not indicated above.



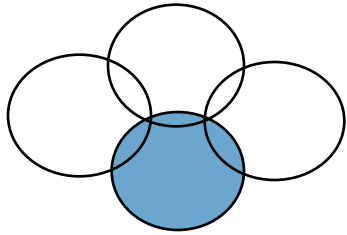


Content Development

Evidence-Based Practice Briefs

- Developed for all 24 EBP
- Provide content to states while modules are still under development
- All briefs contain:
 - Evidence base supporting the effectiveness of the practice
 - Overview describing the practice
 - Steps for implementation
 - Fidelity implementation checklist





Content Development

Web-Based Module Content

- Pre-Test/Post-Test
- Contextual Information
- Step-by-Step Instructions
- Case Examples
- Video Examples
- Implementation Checklist
- Summary of Evidence Base
- Resources



Collaboration with OCALI and Partners for Module Development

<http://www.autisminternetmodules.org/>

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HIGHLIGHTED MODULES



STRUCTURED WORK SYSTEMS AND ACTIVITY ORGANIZATION

Individuals with autism spectrum disorders (ASD) thrive in well-organized situations. Environments that provide clear expectations and predictable routines promote increased engagement and on-task behavior. Creating such environments often involves the use of individual work systems.

This module will define individual work systems, offer strategies for developing such systems, and discuss how these systems might be used at home, school, work, and in the community.



PEER-MEDIATED INSTRUCTION AND INTERVENTION (PMII) FOR CHILDREN WITH AUTISM SPECTRUM DISORDERS

Social impairment and difficulty with social reciprocity – or understanding the back-and-forth nature of social interactions – is perhaps the single most defining feature of autism. Peer-mediated instructional approaches can address social concerns by teaching children and youth with ASD new social skills and increasing social opportunities within natural environments, often a primary goal of families. This module will explain **peer-mediated instruction and**

AIM COLLABORATING PARTNERS



OCALI | Educational Service Center of Central Ohio



THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS



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AUTISM SPECTRUM DISORDERS

Introduction

Pre-Assessment

Overview

Learner Objectives

What is Peer-Mediated Instruction and Intervention (PMII)?

Who Can Use PMII and How Does it Work?

PMII for Early Childhood: Peer Initiation Training

Steps 1 and 2

Steps 3 and 4

Step 5

Video Examples

Putting it All Together

Late Elementary through High School: Peer Social Networking

Frequently Asked Questions (FAQ)

Summary

Evidence Base for PMII

References and Citation

Post-Assessment

RESOURCES

Step-by-Step Instructions

HOME > Peer-Mediated Instruction and Intervention (PMII) for Children with Autism Spectrum Disorders > PMII for Early Childhood: Peer Initiation Training > Video Examples

VIDEO EXAMPLES

The first two videos should be viewed after completing the content for Steps 1 and 2. The first is a training session video, the second is a practice session video. 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?"

[\[Download Movie Transcript \(PDF\) \]](#) | [\[Download Quicktime Media Player \]](#)

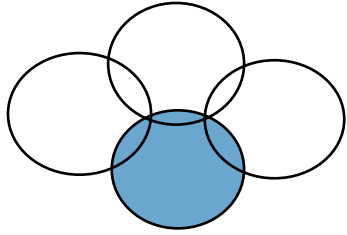
TEXT SIZE

A A A RESET ?

SEARCH GLOSSARY

GO





Content Development Evaluation

- Development of Assessment Instruments
 - Autism Program Environment Rating Scale (APERs)*
 - Evidence-Based Practices Inventory
 - Fidelity Implementation Checklists*
 - Goal Attainment Scaling
 - Family Program Questionnaire



Developing an Assessment to Evaluate Program Quality

- *Autism Program Environment Rating Scale (APERS)*
- Observational tool used to evaluate programs that serve children and youth with ASD
- Two versions developed:
 - APERS-Preschool/Elementary
 - APERS- Middle/High School



Rationale for Developing the APERS

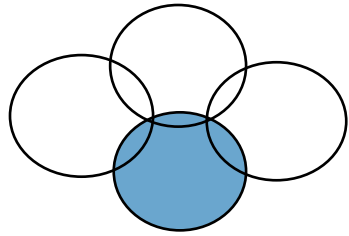
Program Quality

- Contextual features of the program that represents best practices
- Program quality as the house in which practices are employed

EBP

- EBP as specific tools for specific skills
- EBP as the furniture or appliances designed for specific functions



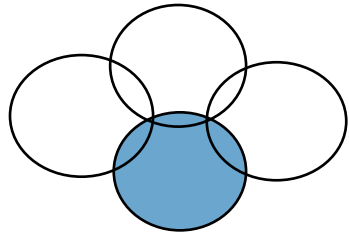


Content Development

Autism Program Environment Rating Scale (APERS)

- Learning Environment
- Positive Learning Climate
- Assessment
- Social Competence
- Personal Independence/Competence
- Promoting Appropriate Behavior
- Family Involvement
- Teaming
- Transition Planning



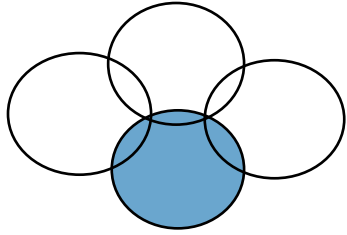


Content Development

Fidelity Implementation Checklists

- Individualized for each EBP
- Developed as part of online modules and EBP briefs
- Used to measure how well practitioners implement practices
- Also used to provide onsite coaching and technical assistance to professionals in model sites





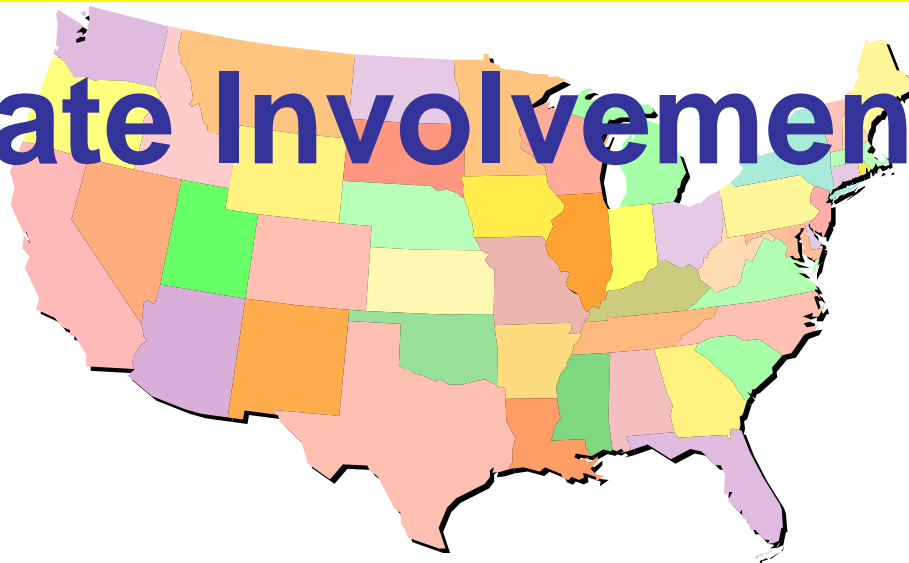
Content Development

Website

- Launched September 2007
- Provides basic information about the project and state application
- Received over 38,000 hits since its inception
- NPDC staff in process of developing online forums
 - Hosted by NPDC staff quarterly
 - Focused on implementation of EBP
 - Members from past and current states invited to join discussion



State Involvement



- Year 1, Cohort 1: Master content and process in collaboration with NPDC staff (IN, NM, WI)
- Years 2-4: States complete competitive application
 - Year 2, Cohort 2: KY, MN, MI
 - Year 3, Cohort 3: ???
 - Year 4, Cohort 4: ???
- Total number of states served: 12



Key Activities with States

- Assemble a planning team consisting of key stakeholders and policymakers in the state
- Establish model demonstration sites
- Create a technical assistance team
- Prepare a strategic plan that describes goals and timelines for the state's involvement
- Participate in summer institute
- Conduct ongoing technical assistance
- States take the lead in professional development activities in Year 2



State Application Process

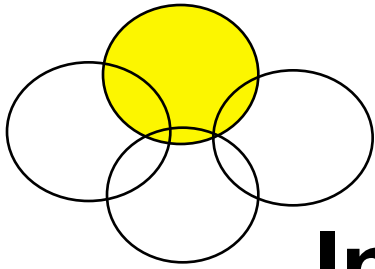
- First year: Selected states based on interest and willingness to participate
- Application process established in Year 1 for remaining years
 - States submit application online (<http://www.fpg.unc.edu/~autismPDC/training/state-partners.cf>)
 - Applications reviewed by 3 independent reviewers
 - Cohort 3 applications were due June 1, 2009



State Planning Teams

- Establish a state planning team in spring of first year of involvement
- Develop a strategic plan for professional development and technical assistance
- Identify technical assistance support teams, model demonstration sites, and service providers

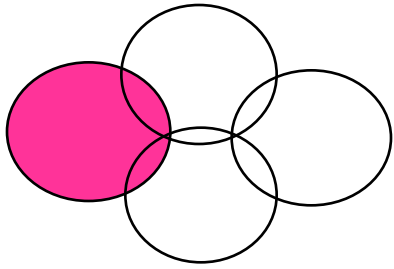




Professional Development Intensive Summer Institute

1. Increase knowledge of EBP
2. Identify elements of high-quality programs
3. Build networking, collaboration, and skills of members of state autism training team, including model site personnel
4. Develop plans for model sites, technical assistance, and for dissemination across state

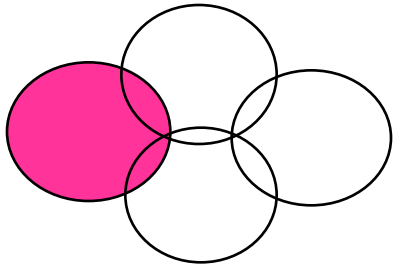




Technical Assistance

1. Development of state strategic plan
2. Development of model sites
3. Use of goal attainment scaling
4. Development of community of practice
5. Onsite coaching/mentoring
 - Development/evaluation of high-quality programs
 - Use of EBP
 - Progress monitoring of target students

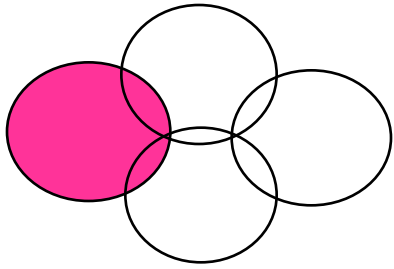




Follow-Up Technical Assistance

- NPDC staff, state TA providers, and model site team members develop a plan for incorporating EBP into their programs
- NPDC staff and state TA providers meet with model site team members
- State TA providers and model site team members establish a schedule for TA

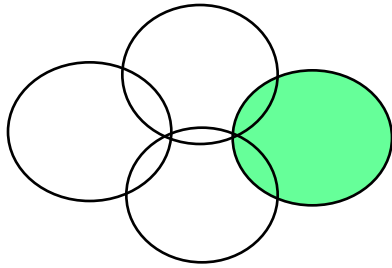




States' Year 2 Involvement

- State personnel take the lead in providing professional development and TA to a new set of model sites
- NPDC collaborate with state staff in administering online course, planning and delivering summer institute, and collecting evaluation data

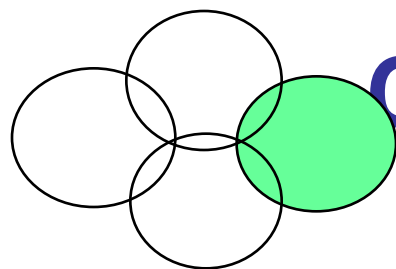




Evaluation

- Evaluation of activities in four work areas:
 - Content development
 - Professional development
 - Technical assistance
 - Systems change



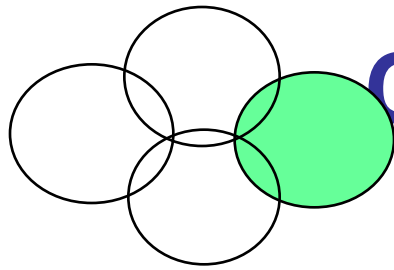


Content Development

Online Course

- NPDC staff have refined evaluation of each session to request suggestions for improvement
- Revision of course will begin summer 2009



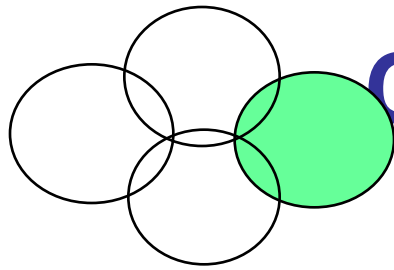


Content Development

Online Course

- Pre- and post-test data indicate that participants' knowledge of EBP improved by an average of 17%



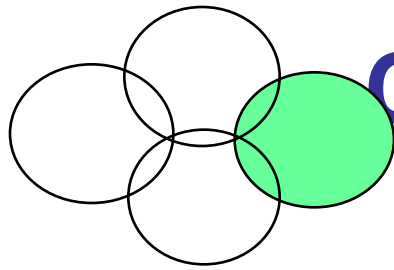


Content Development

Evidence-Based Practice Briefs

- Identified 24 EBP – complete briefs for all of these practices
- Briefs are being field-tested by current collaborating states
- Collecting feedback about EBP briefs
- NPDC staff will revise briefs this summer.



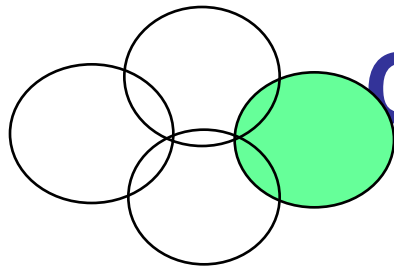


Content Development

Evidence-Based Practice Modules

- Initiated a validation process for online modules
- PMII, PECS, PRT are validated and posted on AIM website
- All modules contain pre- and post-tests to evaluate changes in learner knowledge



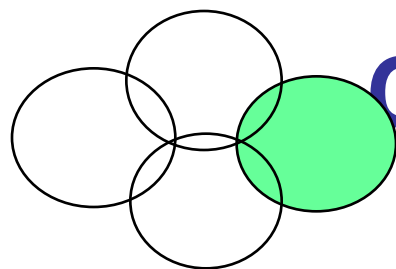


Content Development

APERS

- Both APERS versions being used to collect pre- and post-test data to evaluate changes in program quality
- Changes in APERS scores?????
- NPDC staff submitted a grant proposal to US Department of Education to study the APERS further.



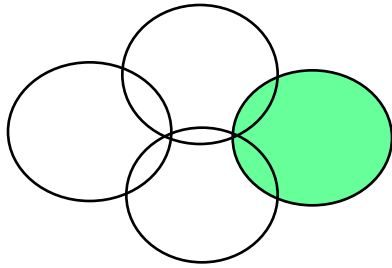


Content Development

Website

- Hits to website and downloading of website documents has increased substantially since its inception in September 2007.
- Summer 2009: NPDC will launch password-protected webpage that will provide state participants with access to EBP briefs



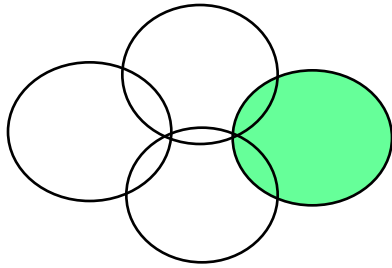


Professional Development

Completion of State Application

- Competitive state application process initiated in 2008 – 9 states applied
- Outside reviewers rated applications – reviewers provided no suggestions for improving the process
- Cohort 3 applications due June 1, 2009





Impact

- Impact will be examined through evaluation studies conducted in Years 3-5 of the project.
 - Will involvement in NPDC lead to ongoing professional development activities in the state?
 - Will NPDC activities lead to changes in the age at which children are diagnosed as having ASD?

