Objectives

- Frame the history and evolution of evidence-based practice (EBP)
- Define terms commonly (mis)used in the field
- Describe a model for EBP that builds on empirical evidence and professional/family knowledge and values
- Identify resources
- Describe a problem solving process for using EBP

Evolution of Evidence-Based Practice in EI/ECSE

- Developmentally Appropriate Practice by NAEYC (Late 1980s)
- DEC Recommended Practices (Early 1990s)
  - Based on knowledge of multiple constituency groups
    - Professionals
    - Family
    - Practitioners

Criteria for
DEC Recommended Practice
(Odom & McLean, 1996)

- Research- or value-based

- Family-centered

- Multicultural

- Cross-disciplinary

- Developmentally and chronologically appropriate

- Normalization

Evolution of Evidence-Based Practice in EI/ECSE

- Revision of DEC Recommended Practices in late 1990s.
  - Review of decade of research on EI/ECSE
  - Involvement of constituency group
- Linkage of empirical support and practices

Parallel Movement in Education

- NRC Panel that criticized the quality of educational research
- Educational Sciences Reform Act
- No Child Left Behind
- Evidence-based medicine as a model

Evidence-Based Medicine

The integration of the best available research evidence with clinical expertise and patient values.

(Sackett et al., 2000)

According to Davies (1999), "evidence-based education, like evidence-based medicine, is not a panacea, a quick fix, cookbook practice, or the provider of ready-made solutions to the demands of modern education. It is a set of principles and practices which can alter the way people think about education, the way they go about educational policy and practice, and the basis upon which they make professional judgments and share their expertise" (p. 118).

A Reflection on Terminology

- Recommended practices
- Scientifically based practices
- Evidence-based practices—A Noun
  - Specific practices that have evidence of efficacy or effectiveness
- Evidence-based practice—A Verb
  - A process for using empirical research and knowledge and values of professionals and families
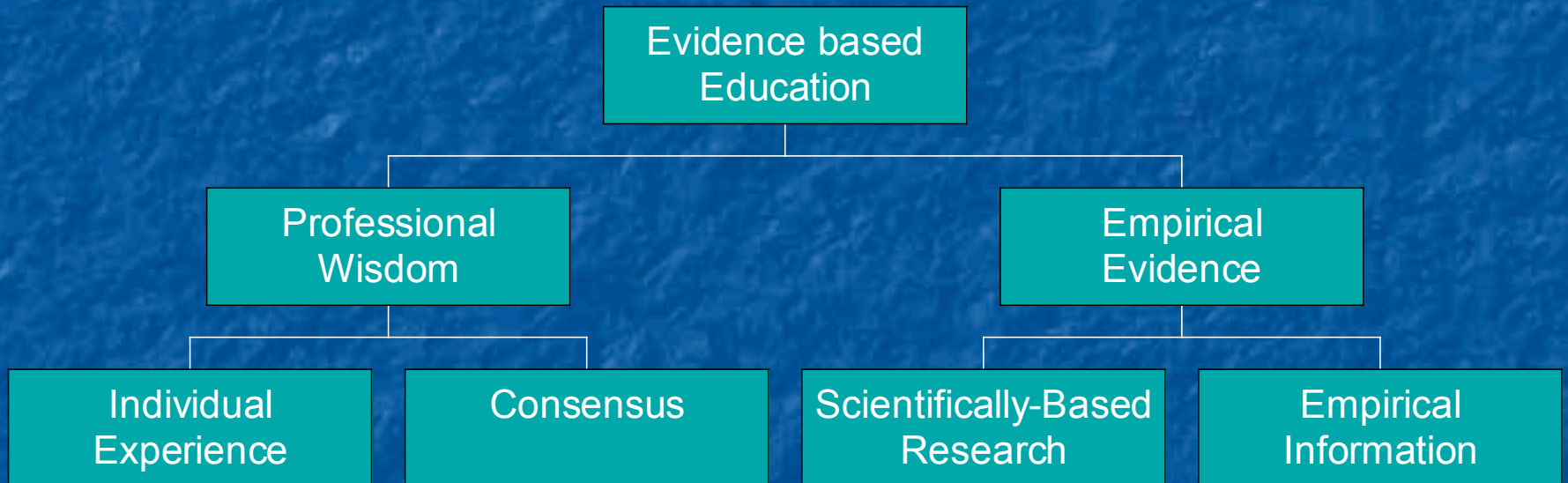
Evidence-Based Practice (EBP)

*a decision-making process
that integrates the best
available research evidence
with family & professional
wisdom & values*

(Buysse & Wesley, 2006; Snyder, 2006; Winton, 2006)

Evidence-based Education
(Whitehurst, 2002)

Sources of Scientific Research

- Experimental Research
  - Experimental group design
  - Single subject design
- Standards for EBPs Established by Professional Organizations
  - CEC DR
  - APA
  - ASHA

The REVIEW PROCESS

What sources of knowledge may guide your practice?

Research and Training Center
on Early Childhood Development

Center for Evidence-Based Practices   Puckett Institute

Welcome

The mission of the Research and Training Center (RTC) on Early Childhood Development is to promote and enhance the healthy development of infants, toddlers, and preschoolers with or at risk for developmental delays or disabilities. The RTC was established to create a bridge between research evidence and early childhood intervention practices.

Our website is designed specifically for parents, therapists, early childhood educators and early interventionists, as well as researchers. The website includes information about effective practices based on research. If you are interested in the latest research on a particular intervention practice, visit our products page. If you can't find what you are interested in, let us know what you need by completing the topic suggestion form. We are committed to making the materials on our website as useful as possible. We appreciate any feedback you can give us to make improvements, and encourage you to visit our feedback page.

The RTC is a major initiative of the Center for Evidence-Based Practices at the Orelena Hawks Puckett Institute. RTC partners include the Center for Excellence in Early Childhood Education, Asheville, NC, and the Family, Infant and Preschool Program, Western Carolina Center in Morganton, NC. The RTC is funded by the U.S. Department of Education, Office of Special Education Programs (OSEP), Research-to-Practice Division.

More information for:

Early Childhood Practitioners
Childcare Professionals
Parents
Researchers

Take a look!

Centerscope Articles about the conceptual and operational framework of the RTC

Bridges Practice-centered research syntheses of topics related to early childhood development

Bottomlines One-to-two page summaries of practice-based research syntheses

IDEAs that Work

Sposored by the Office of Special Education and Rehabilitative Services.

RTC Privacy Policy.

W3C XHTML 1.0   AAA Bobby APPROVED   W3C CSS

For What Kinds of Practices Do We Find Evidence?
(RCTs-Early Childhood)

- Response Contingent Learning
- Caregiver Responsive Style of Interaction
  - Effects on language and attachment
- Parent-Child Interaction Therapy for Children with Disruptive Behavior
- Use of "social toys" to promote peer interaction
- Pivotal Response Training for Children with Autism

For What Kinds of Practices Do We Find Evidence?
(RCTs-Early Childhood)

- Dialogic reading for toddlers & preschoolers
- Responsive home environment and socioemotional development
- Interventions to promote parent sensitivity
- Guided design learning and adult problem solving
- Contingent touch and infant responses

For What Kinds of Practices Do We Find Evidence?
(RCTs-Early Childhood)

- Incorporating child interest in teaching and learning activities
- Adult reinforcement and child behaviors
- Treadmill to promote walking (but feasibility for parent has not been examined)

For What Kinds of Practices Do We **Not** Find Evidence?
(RCTs-Early Childhood)

- Dolphin Therapy

- Diagnostic Practices for EC ADHD

- Melodic intonation therapy

- Infant Massage

- Yoga and children with developmental delays

- Craniosacral therapy

Center on the Social and Emotional Foundations for Early Learning

Tuesday, Nov 1

About CSEFEL
- About Us
- Contact Us

Resources
- Training Modules
- What Works Briefs
- Practical Strategies
- State Strategic Plans
- Chat
- Links

Welcome!

The **Center on the Social and Emotional Foundations for Early Learning** is a national center focused on strengthening the capacity of child care and Head Start programs to improve the social and emotional outcomes of young children.

The Center will develop and disseminate evidence-based, user-friendly information to help early childhood educators meet the needs of the growing number of children with challenging behaviors and mental health challenges in child care and Head Start programs.

The Center on the Social and Emotional Foundations for Early Learning will:

- Focus on promoting the social and emotional development of children as a means of preventing challenging behaviors.

- Collaborate with existing training and technical assistance (T/TA) providers for the purpose of ensuring the implementation and sustainability of practices at the local level.

- Engage in a comprehensive, culturally sensitive approach that is inclusive of and responsive to the needs of programs, families, other professionals, and communities.

HURRICANE KATRINA RESOURCES

Training Modules are now available! View or **Order** them now!

Center on the Social and Emotional Foundations for Early Learning

Introduction to the What Works Briefs
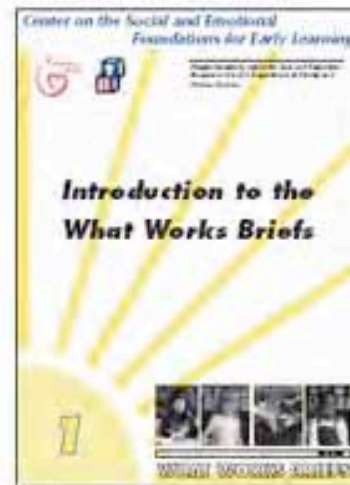
Check out the **What**

What Works Briefs: Summaries of Effective Practices for Supporting Children's Social-Emotional Development and Preventing Challenging Behaviors.

Brief 1 *Introduction to the What Works Briefs*

Brief 2 *Understanding the Impact of Language Differences on Classroom Behavior* **by R. M. Santos, M. M. Ostrosky**

Brief 3 *Helping Children Understand Routines and Classroom Schedules* **by M. M. Ostrosky, E. Y. Jung, M. L. Hemmeter, D. Thomas**

Brief 4 *Helping Children Make Transitions between Activities* **by M. M. Ostrosky, E. Y. Jung, M. L. Hemmeter**

Brief 5 *Using Classroom Activities and Routines as Opportunities to Support Peer Interaction* **by T. Bovey, P. Strain**

What Works
CLEARINGHOUSE

The What Works Clearinghouse was established by the U.S. Department of Education's Institute of Education Sciences to provide educators, policymakers, and the public with a central, independent, and trusted source of scientific evidence of what works in education. It is administered by the Department through a contract to a joint venture of the American Institutes for Research and the Campbell Collaboration.

What education areas should the WWC review in future years?

Click here for information on submitting *studies* and *interventions*.

What Works Clearinghouse
2277 Research Boulevard, MS 6M
Rockville, MD 20850
Email: wwcinfo@w-w-c.org
Phone: 1–866–WWC–9799
Fax: 301–519–6760

Review Indicators in WWC

Key

⊕ **Positive effects:** strong evidence of a positive effect with no overriding contrary evidence

⊕ **Potentially positive effects:** evidence of a positive effect with no overriding contrary evidence

⊕ **Mixed effects:** evidence of inconsistent effects

❓ **No discernible effects:** no affirmative evidence of effects

⊖ **Potentially negative effects:** evidence of a negative effect with no overriding contrary evidence

⊖ **Negative effects:** strong evidence of a negative effect with no overriding contrary evidence

Review in Early Childhood for WWC

Effectiveness ratings for Early Childhood Education programs in six domains

Intervention	Oral language	Print knowledge	Phonological processing	Early reading/writing	Cognition	Math
DaisyQuest			⊕			
Dialogic Reading	⊕		❓			
Interactive Shared Book Reading	⊕	❓		⊕?		
Phonological Awareness Training			⊕			
Phonological Awareness Training plus Letter Knowledge Training	⊕?	⊕	⊕?	⊕?	❓	
Shared Book Reading	⊕		⊕?			
Sound Foundations			⊕?	⊕?		
Words and Concepts	❓					

WWC Review in Beginning Reading

Effectiveness ratings for Beginning Reading programs in four domains

Intervention	Alphabetics	Comprehension	Fluency	General reading achievement
DaisyQuest	⊕			
Reading Recovery®	⊕	❊	❊	⊕

Consider a 5-step Process
Adapted from Evidence-Based Medicine

1. Pose an answerable question.
2. Find best available research evidence. *(Where?)*
3. Appraise evidence quality & relevance. *(Who? How?)*
4. Integrate the research evidence with professional and family wisdom & values. *(How?)*
5. Evaluate effectiveness of steps 1-4. *(How?)*

Step 1:
Posing Question

	Target Group or Issue	Intervention	Comparison Condition (if applicable)	Outcomes of Interest
Question 1	For young children with disabilities…	…is hippotherapy		effective for improving motor, social-emotional and language functioning?
Possible Search Terms	young children, special needs, cerebral palsy	Hippotherapy, therapeutic riding, therapeutic horseback riding, horseback riding, equine therapy, riding therapy, therapeutic horsemanship		[could include specific outcome measures in search]

Adapted from: What Works for Children Group. (2003). *Evidence guide: An introduction to finding, judging, and using research findings on what works for children and young people*. London: Economic and Social Research Council. [MIND Grant – Evidence-based practice seminar]

Step 2:

Finding "Best Available" Evidence: Example Search

- CINAHL database

- Search terms
  "hippotherapy" *and* "cerebral palsy"

- Results of search evaluated against question posed and study inclusion/ exclusion criteria

Search Results….

- McGibbon, N. H., Andrade C., Widener G., & Cintas H. L. (1998). **Effect of an equine-movement therapy program on gait, energy expenditure, and motor function in children with spastic cerebral palsy: A pilot study.** *Developmental Medicine & Child Neurology. 40,* 754-62. (58 ref)

- Debuse, D., Chandler C., & Gibb C. (2005). **An exploration of German and British physiotherapists' views on the effects of hippotherapy and their measurement.** *Physiotherapy Theory and Practice, 21*(4): 219-42.

- Meregillano, G. (2004). **Hippotherapy.** *Physical Medicine and Rehabilitation Clinics of North America, 5*(4), 843-54. (17 ref)

- Casady, R. L., Nichols-Larsen, D. S. (2004). **The effect of hippotherapy on ten children with cerebral palsy.** *Pediatric Physical Therapy, 16*(3), 165-72. (37 ref) **AN:** 2004207975.

- Benda, W., McGibbon, N. H., & Grant K. L. (2003). **Improvements in muscle symmetry in children with cerebral palsy after equine-assisted therapy (hippotherapy).** *Journal of Alternative and Complementary Medicine. 9*(6): 817-25. (24 ref)

-
  Haehl, V., Giuliani C., & Lewis C. (1999). **Influence of hippotherapy on the kinematics and functional performance of two children with cerebral palsy.** *Pediatric Physical Therapy, 11*(2): 89-101. (26 ref) [See Bridges summary]

- Delinger, C. & Cummins, T. (1997). **Interview with a practitioner: Hippotherapy.** *Alternative Health Practitioner, Fall-Winter; 3*(3): 161-5.

- How many of above might meet the inclusion/exclusion criteria?

Step 3:
Appraising the Evidence

- Which approach?
  - Levels of evidence
  - Quality indicators
  - Functional approaches
- Individual studies versus group of studies
- Functional approach used in available research synthesis
- Consider *quality, transparency, relevance* of evidence

Select Criteria for Appraising Research Syntheses: **Transparency**

- Is it clear what criteria were used to appraise the evidence?

- Do the criteria appear appropriate for answering the question?

- Are inter-coder agreement procedures described?

- Are conclusions about the intervention supported by the appraisal evidence presented?

Select Criteria for Appraising Research Syntheses: **Relevance**

- How similar to **your** target group are the participants in the reviewed studies?

- How similar is **your** planned intervention to the intervention described in the synthesis?

- Do the results of the synthesis help inform **your** question?

- Do the results of the synthesis help inform **your** EBP decisions?

Select Criteria for Appraising Research Syntheses: **Quality**

- Is the question that focuses the synthesis stated or able to be inferred?

- Is a clear description provided for intervention under consideration?

- Are search strategies used sufficiently described?

- Are sources used in search listed?

- Is study inclusion and exclusion criteria specified?

Step 4:
Integrating

- Integrate research evidence with professional and family wisdom & values

Step 5:
Evaluation

- Evaluate the effectiveness of steps 1–4

Where do we go from here?

How can we reach agreement as a field about what evidence-based practice means?

Does research trump professional and family wisdom and values?

How can we make knowledge accessible and transparent to anyone who desires it?

Eminence-Based Practice

Making the same mistakes with increasing confidence over an impressive number of years.

—O'Donnell, 1997, *A Skeptic's Medical Dictionary*

This presentation
is available online at

www.fpg.unc.edu/~handouts/EBP_Odom_Buysse.pdf

FPG research and outreach has shaped how the
nation cares for and educates young children.

www.fpg.unc.edu