

## Clinical Forum

### Prologue

# Combining Research and Reason To Make Treatment Decisions

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The seeds of this clinical forum were sown at the 2003 American Speech-Language-Hearing Association (ASHA) Annual Convention when I went to Marc Fey and Laura Justice's session on evidence-based practice (EBP) in the schools (Fey & Justice, 2003). After Fey discussed the different levels of research evidence, Justice talked about the science and craft of making clinical decisions. She defined craft as a theoretically and goal-oriented body of knowledge that is achieved through trial and error. Vaughn and Dammann (2001) noted that when craft is inoculated from superstition and folklore, it leads to acceptable results, and the methods developed are often useful techniques and skills. Justice went on to point out that clinicians often rely on craft when evidence is not available. At this same ASHA Convention, I presented a miniseminar entitled, "How to Decide Which Speech Treatment Approach to Use" (Kamhi, 2003). If ASHA allowed titles to exceed 10 words, the rest of the title would have been "When There Is Limited Evidence To Help You Decide." When I got back to my office after the conference, I looked at the ASHA Web site for other presentations that dealt with EBP and found one by Nan Bernstein Ratner in which she discussed some of the same issues as they applied to fluency treatment.

The common theme across these three 2003 ASHA presentations was that the principles of EBP are not necessarily easy to apply to the various disciplines in speech-language pathology because of the limited evidence available to support clinical decisions. There are also controversial features of EBP that affect its implementation. These include questions about acceptable forms of evidence and the importance of nonresearch factors on treatment efficacy. Interest in addressing these questions led to a miniseminar presented by me, Nan,

and Laura at the 2004 ASHA Convention entitled, "Combining Research and Reason To Make Treatment Decisions." After reviewing the evidence for treating a particular disorder type (e.g., fluency, phonology, early literacy), we each talked about how this research could be combined with reason to decide which treatment approach to use with clients who have fluency, phonological, and literacy problems.

The clinical forum that follows evolved from this 2004 ASHA miniseminar. In addition to articles by the three of us, the forum contains an article by Ron and Sandi Gillam on child language intervention. The four articles are followed by commentaries from Ray Kent, Ann Tyler, Teresa Ukrainetz, and Marc Fey. Each of the articles and commentaries is summarized briefly below.

Bernstein Ratner had already committed to writing an article based on her ASHA presentation for the *Journal of Fluency Disorders* (Bernstein Ratner, 2005), so I was very happy that she accepted the challenge of taking a broader disciplinary approach to the implementation of EBP in an article here. In her article, Bernstein Ratner considers the valuable and controversial aspects of EBP as well as the obstacles that may impede the application of evidence to clinical practice. Among other things, she points out that frequently used treatments may have little firm validation data and little relevance to the actual profile of the client one is seeing. Bernstein Ratner challenges all of us to consider whether it is therapies, therapists, or some combination of both that results in the best treatment outcomes.

In his commentary, Kent notes that our professions are not alone in struggling with EBP. As reflected in the title of the commentary, the goal of EBP is progress, not perfection. Kent welcomes articles like Bernstein Ratner's because they are a necessary part of the struggle to define a philosophy and an implementation of EBP that is

suited to our profession. The commentary is organized according to the key questions posed by Bernstein Ratner: How does one define evidence relevant to clinical practice? What is the role of theory in evaluating evidence? How does one distinguish between the contributions of “practices” and “practitioners?” How does a field ensure that clinically relevant evidence reaches its constituency and is endorsed by professionals? Kent provides thoughtful answers and reflections to these questions, drawing on his experience as ASHA vice president for research and technology and his knowledge of the ongoing struggles that other professions have experienced while implementing EBP. In his role as ASHA Vice President, Kent has overseen our organization’s efforts to make EBP ubiquitous throughout the profession. The ultimate goal of these efforts is to adapt EBP to the unique character of our profession.

My article on speech–sound disorders is an expanded version of my 2003 and 2004 ASHA presentations and the concluding chapter I wrote for my recent co-edited book on phonological disorders (Kamhi, 2005). In the article, I consider how research, clinical expertise, client values, a clinician’s theoretical perspective, and service delivery issues affect the decisions that clinicians make to treat children with speech–sound disorders. I believe, like Ylvisaker (2004), that treatment decisions are influenced the most by the changes that occur in client behaviors. These changes must, however, be experimentally validated, which is not always easy to do.

Tyler is in general agreement with me that how we validate clinical decisions is the key question. She emphasizes the need for administering probes for untrained as well as trained stimuli at regular intervals (e.g., 6, 8, and 12 weeks). She believes that it is crucial to show that changes occurred in those aspects of the system that were targeted and that no changes occurred in untargeted aspects. Tyler also suggests that service delivery factors such as the intensity of treatment are critically important to the rate of change and long-term outcomes, but adequate research is lacking in this area.

Justice focuses her contribution on how response to intervention (RTI), an evidence-based perspective, can be used to decrease the prevalence of reading problems and the role that speech-language pathologists (SLPs) might play in preventive and remedial efforts. A significant portion of her article is devoted to describing the RTI model. RTI is an educational policy that is driven by EBP to provide multitiered interventions to reduce children’s risk for reading failure. Justice makes the compelling argument that SLPs can serve their clients best by working collaboratively with other school professionals to design and implement preventive reading interventions beginning in preschool and continuing through the early school years.

Ukrainetz’ commentary focuses on how RTI will impact the role that SLPs play in serving children with reading and language disabilities. She notes that “effective intervention is characterized by the provision of *repeated opportunities* in an *intensive* format with *systematic support* for *explicit* learning objectives” (p. 301) and cites research showing that current school-based language intervention does not have these qualities. To address these shortcomings, Ukrainetz argues that it is crucial for SLPs to increase the intensity of their interventions. She suggests three ways to do this: (a) revise eligibility criteria to reduce the number of qualifying children, (b) limit the range of speech-language treatment targets, and (c) reduce the time that children remain on caseloads. RTI provides the framework for facilitating these changes in language intervention.

In the final article, Gillam and Gillam describe the seven-step EBP decision-making process and show how this process can be used to

evaluate intervention approaches in order to improve grammatical morphology in children with language impairments. One of the most intimidating aspects of the EBP process is determining the level of evidence for studies that have been selected for review and critically evaluating a study’s merit. Gillam and Gillam provide a succinct summary of these levels and discuss how they assigned levels for particular studies that targeted grammatical morphology.

Fey, like many others in this clinical forum, acknowledges the many obstacles involved in implementing EBP, especially over the short term. He believes that all of these obstacles are tractable, but that they must be addressed head on. The ones he addresses in his commentary are the costs to clinicians of doing EBP and the potential problems with the systems for rating levels of external evidence. For example, an important consideration in rating external evidence is distinguishing between research designs and study quality. Studies that provide lower levels of evidence are not necessarily lower in quality than studies that provide higher levels of evidence. Like many others in this clinical forum, Fey makes the important point that clinicians who attend to research-based evidence only and fail to consider client and clinician factors are not doing EBP.

Well, there you have it—four articles and four commentaries. I hope your appetite has been sufficiently whetted. Enjoy!

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## REFERENCES

- Bernstein Ratner, N.** (2005). Evidence-based practice in stuttering: Some questions to consider. *Journal of Fluency Disorders, 30*, 163–188.
- Fey, M., & Justice, L.** (2003, November). *Evidence-based practice in the schools*. Miniseminar presented at the Annual Conference of the American Speech-Language-Hearing Association, Chicago.
- Kamhi, A.** (2003, November). *How to decide which treatment approach to use*. Miniseminar presented at the Annual Conference of the American Speech-Language-Hearing Association, Chicago.
- Kamhi, A.** (2005). Summary, reflections, and future directions. In A. Khami & K. Pollock (Eds.), *Phonological disorders in children: Clinical decision making in assessment and intervention* (pp. 211–228). Baltimore: Brookes.
- Kamhi, A., Bernstein Ratner, N., & Justice, L.** (2004, November). *Combining research and reason to make treatment decisions*. Miniseminar presented at the Annual Conference of the American Speech-Language-Hearing Association, Philadelphia.
- Vaughn, S., & Dammann, J.** (2001). Science and sanity in special education. *Behavioral Disorders, 27*, 21–29.
- Ylvisaker, M.** (2004, November). *Evidence-based practice and rational clinical decision making*. Paper presented at the Evidence-Based Practice in Child Language Disorders Working Group, Austin, TX.

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