LSHSS

Clinical Forum

Evidence-Based Practice in Communication Disorders: Progress not Perfection

Ray D. Kent
University of Wisconsin–Madison

The title for this commentary is adapted from the title of an article that appeared in *Health Psychology* (Davidson, Trudeau, & Smith, 2006). The professions of audiology and speech-language pathology are not alone in struggling with evidence-based practice (EPB). Articles like Nan Bernstein Ratner's are a welcome and necessary part of this struggle as we attempt to define a philosophy and an implementation of EBP that is suited to our professions. EBP is very much a work in progress, not a polished perfection. At the time I am writing this commentary, the Advisory Committee on Evidence-Based Practice (ACEBP) is deliberating fundamental issues such as a system for levels of evidence (LOE) or strength of recommendation (SOR). The American Speech-Language-Hearing Association (ASHA) professions have much work to do, but as I hope to show in the comments that follow, the progress to date is substantial and forward-looking.

ABSTRACT: **Purpose:** This commentary is written in response to a companion paper by Nan Bernstein Ratner (Evidence-Based Practice: An Examination of its Ramifications for the Practice of Speech-Language Pathology).
Method: The comments reflect my experience as Vice President for Research and Technology of the American Speech-Language-Hearing Association (ASHA). One of the responsibilities of the Vice President is to monitor the work of the Advisory Committee on Evidence-Based Practice.
Conclusion: Evidence-based practice (EBP) is a challenging but attainable goal for audiology and speech-language pathology. Our professions have made rapid progress in developing the foundations for EBP. To be sure, a great deal of work remains to be done, but we have learned from the experiences of other professions and have built our own systems to support EBP.

KEY WORDS: evidence-based practice, systematic reviews, publications

Even a cursory look at the recent literature in medicine, allied health, psychology, and related fields quickly reveals the tensions and challenges associated with EBP. At one extreme are papers questioning the legitimacy of this approach for certain specialties such as psychiatry (Maier, 2006). At another extreme we find papers extolling the benefits of EBP in directing practitioners to interventions with known benefit (Rosenberg & Donald, 1995). And, we see papers that bemoan the failure to adjust clinical practice to the principles of EBP, even when the evidence is strong (Kitzinger et al., 2006). In the middle ground of the debate are numerous papers that address various aspects of philosophy and implementation. Bernstein Ratner's article is in this middle ground, and it raises some issues that deserve reply. The discussion that follows is keyed to the primary questions posed in Bernstein Ratner's article.

HOW DOES ONE DEFINE EVIDENCE RELEVANT TO CLINICAL PRACTICE?

This question unfolds into a number of related questions, but space limitations permit only a brief consideration in this commentary. One means of addressing clinical relevance already has been adopted by our sister disciplines, including health psychology. The idea is to publish research reviews accompanied by clinician commentary (Davidson et al., 2006), with the goal of supporting the

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translation of research findings into evidence-based assessments and treatments. In fact, this approach is wholly consistent with the policy on EBP that has been adopted by ASHA, which states that EBP takes into account current best evidence, clinical expertise, and client values. This is not to imply that the task is simple, because it will require a continuing commitment to synthesize external evidence with practitioner experience. We may need to turn to knowledge management, which is "a structured process for the generation, storage, distribution, and application of knowledge in organizations" (Sandars & Heller, 2006, p. 341). Knowledge management can be accomplished by communities of practice that consider tacit knowledge (practitioner experience) with explicit knowledge (evidence). An illustration of how research evidence can be combined with expert opinion is found in an article on the role of exercise therapy in the management of osteoarthritis of the hip or knee (Roddy et al., 2006). Clinical experience, like client values, needs to be considered seriously, not as an afterthought or a place of last resort. Finally, we may consider a broader vision of EBP research, including the possibility of designing and conducting practical behavioral trials, as described by Glasgow, Davidson, Dobkin, Ockene, and Spring (2006).

HOW DOES ONE EVALUATE THE STRENGTH AND APPLICABILITY OF CLINICALLY RELEVANT EVIDENCE?

See the response to the similar question below (How does a field ensure that clinically relevant evidence reaches its constituency and is endorsed by professionals?).

WHAT IS THE ROLE OF THEORY IN EVALUATING EVIDENCE?

In my view, theory is highly important, and it is unfortunate that research evidence is sometimes construed as theory neutral or theory irrelevant. Research is rarely theory neutral, given that theory is important to connect facts and to formulate testable hypotheses. Theory is a compass that directs research efforts in promising directions, and it is critical for the synthesis of the components of all research, including clinical research. Moreover, theory is critical to clinical practice, right down to the level of the individual client.

Tonelli (2006) recommended an alternative to evidence-based medicine in which any clinical decision potentially involves five elements of consideration: empirical evidence, experiential evidence, pathophysiologic rationale, client goals and values, and system features. The practitioner who is armed with research evidence, clinical experience, and an awareness of consumer values probably operates with a theory that integrates the various sources of information into a best understanding of the disorder and its management. The component that Tonelli named "pathophysiologic rationale" might be called "theory of disorder" (akin to "mechanism of action" cited by Bernstein Ratner), and this component has a rightful place in EBP.

Published descriptions of EBP may have given short shrift to theory, perhaps because of the emphasis given to research evidence in the form of statistical data. But to divorce theory from empirical observation would divide and hinder science. If I were to go to a practitioner with a disorder, and that individual told me as a client that he or she had no theory, I would suspect that person's competence. Even for poorly understood disorders, such as childhood apraxia of speech, experienced clinicians have their own theories of the disorder that guide assessment and intervention. The theory may change over time, as theories do, but each theory has an important, if impermanent, value in making sense of all that is known. At a more formal level, it has been recommended that theoretically informed implementation interventions can overcome some of the limitations in the clinical application of randomized controlled trials or systematic reviews (The Improved Clinical Effectiveness Through Behavioral Research Group, 2006). My expectation is that as experience with EBP increases, it will be enjoined with theory to give us a stronger science.

HOW DOES ONE DISTINGUISH BETWEEN THE CONTRIBUTIONS OF "PRACTICES" AND "PRACTITIONERS?"

This is a hoary question that has always shadowed clinical research, whether under the EBP rubric or its predecessors. I will not presume to know the answer. To those who are responsible for training and supervising clinical practitioners, this question has special meaning. We all know that two students who are exposed to the same clinical instruction will not always become equally adept as practitioners. Likewise, we know that two practitioners, even with comparable years of experience, do not always perform the same assessment or intervention with the same results. Systematic reviews and meta-analyses, which gather and evaluate the results from a large number of studies, help to identify methods that have general benefit, even when they are administered by many different clinicians. To be sure, some individual clinicians will be better than others in virtually all specialties, but this admission does not release us from the obligation to identify assessments and interventions that meet rigorous standards of benefit to our consumers. One of the desired outcomes of EBP is that continuing professional education will be increasingly founded on research evidence, which will enhance the accountability of clinical services.

Our professions are similar to other clinical specialties in which clinical practice "consists of interactions between unique individuals, with unique experiences, and it always takes place in unique situations" (Rolfe, 2006, p. 39). It is not just practitioner uniqueness that complicates our research into EBP, but an amalgamation of uniqueness. In preparing clinicians, academic programs must do what they have always done—provide the knowledge base and develop the interpersonal skills that enable the clinician to work effectively with an ever-changing group of clients in an ever-changing world of clinical service economics.

HOW DOES A FIELD ENSURE THAT CLINICALLY RELEVANT EVIDENCE REACHES ITS CONSTITUENCY AND IS ENDORSED BY PROFESSIONALS?

This is a continuing task for the ACEBP, which will generate recommendations. In the following paragraphs, I summarize some of

the current efforts to support EBP. Bernstein Ratner's article describes many of ASHA's efforts, so I will not say more about those. Rather, I will add to her list, but even these additions do not constitute an exhaustive survey. Happily, EBP is becoming ubiquitous in our professions, and it is now quite a challenge to count its multiple presences and influences.

A first addition to the list is that ASHA has established a National Center for Evidence-Based Practice in Communication Disorders (N-CEP). One of the goals of this center is to maintain a registry of clinical practice guidelines and systematic reviews. This work is done in accord with the criteria of a framework known as the Appraisal of Guidelines for Research and Evaluation (AGREE; The AGREE Collaboration Writing Group, 2003; AGREE Web site: www.agreecollaboration.org), which has been adopted in most European and North American countries. N-CEP also undertakes systematic reviews that are selected from a nomination process. As Bernstein Ratner correctly notes, systematic reviews are not always done to the highest standards and therefore may not be reliable guides for EBP. That is the reason why N-CEP also conducts its own systematic reviews and then convenes a panel of experts to consider the evidence. To my knowledge, very few other professional organizations have taken such a step to ensure the quality of evidence reviews. Second, ASHA's scholarly publications, including this one, require that clinical studies must meet recognized standards for reporting. For example, articles reporting randomized clinical trials must follow the Consolidated Standards for Reporting Trials (CONSORT; Moher et al., 2001), and articles reporting studies of diagnostic accuracy must meet the Standards for Reporting of Diagnostic Accuracy (STARD; Bossuyt et al., 2003). Third, another change that enhances the value of journal articles to all readers is the transition to structured abstracts (which typically summarize a research project in the categories of purpose, method, results, and conclusions). Structured abstracts help to maintain uniformity of information and therefore make literature searches more productive. Speaking of literature searches, a fourth step is that ASHA has made an effort to put a large research literature in the hands of its members. All four of ASHA's scholarly journals are now published online as well as in print, including an extensive archive of past issues to 1980. All ASHA members can access content from any of the four journals, find articles using the advanced search, and take advantage of special features offered by the hosting partner, HighWire Press (http://highwire.stanford.edu).

I cite these examples to show that EBP must be seen as a sustained, systematic effort that draws on multiple resources. Bernstein Ratner is certainly correct in asserting that "bridging between research evidence and clinical practice may require us to confront potentially difficult issues and establish thoughtful dialogue about best practices in fostering EBP itself" (p. 257). The dialogue is healthy, and the issues are not just potentially difficult but are, in fact, difficult. In a relatively short time, the professions of audiology and speech-language pathology have come under the mantle of EBP. As our efforts continue, we may very well adapt EBP to the unique character of our professions, and such adaptations may be a very large part of the solution to the problems that Bernstein Ratner describes.

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Contact author: Ray D. Kent, Waisman Center, Room 435, 1500 Highland Avenue, Madison, WI 53705-2280.
E-mail: Kent@waisman.wisc.edu

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