Teaching Evidence-Based Practice: Overcoming Barriers

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Based on their experience with implementing a course in evidence-based practice for a psychiatry residency program, the authors identify barriers that must be overcome in teaching this approach to practice. Barriers to evidence-based teaching include students’ concern that an emphasis on research evidence may ignore the human context of mental health problems, students’ perception of inconsistency between messages delivered by an evidence-based program and by clinical supervisors, and students’ sense of intimidation by the breadth of material associated with research appraisal. Recommended responses involve an emphasis upon the balance between research knowledge and clinical intuition, explicit discussion of how to manage discrepant approaches to practice in academic and clinical settings, and careful delineation of realistic learning goals with regard to research design and statistical methodology. [Brief Treatment and Crisis Intervention 4:271–275 (2004)]

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Ten years ago, we were asked by the training committee of a psychiatry program to establish a course in evidence-based practice for psychiatric trainees. The training committee was inspired by the growing evidence-based practice movement that had spread rapidly across medical schools worldwide. This new emphasis on the use of research evidence to guide clinical decision making has not been restricted to medicine. It has gained considerable strength in psychology, social work, nursing, and other health-related disciplines. Teaching evidence-based practice is a critical challenge for mental health training programs, including those emphasizing provision of brief therapies. We have experienced encouraging triumphs and difficult setbacks in our efforts to teach evidence-based practice and we anticipate that a similar range of experiences may be encountered across all mental health disciplines. Although our course was developed for psychiatry residents, we believe that the issues we have identified are generic and relevant to

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various mental health disciplines and training programs.

The emphasis on research evidence as a crucial basis for practice decisions is the evidence-based practice paradigm, whose essence is that clinical practice should be founded upon the best information available, generally that derived from well-designed and carefully interpreted research studies (Evidence-Based Medicine Working Group, 1992). Implementation of the evidence-based paradigm in programs that train mental health practitioners is an idea of enormous merit—but, as we all know, an idea’s merit does not guarantee its acceptance. Indeed, it is precisely the core virtues of the evidence-based paradigm (i.e., questioning of unfounded beliefs, rigorous scrutiny of methodology, and critical appraisal of proposed treatments) that may elicit a less than enthusiastic reception from mental health students and practitioners. Evidence-based practice requires one to accept the fallibility and imperfections associated with diagnosis and treatment—even more, to measure and estimate the likelihood of possible failure (and success). This, along with other disconcerting features that may reduce acceptance of an evidence-based approach, must be anticipated. We were heartened to encounter, amongst the psychiatry residents, considerable openness and interest with regard to the ideas and practice of evidence-based mental health.

Residents were concerned that an emphasis on evidence may be too narrow and unfeeling. They wondered whether the evidence-based approach could be overly focused on quantitative data, ignoring the human context of mental health problems. They were wary of being drawn into a detached, number-crunching, dehumanizing style of practice. Consequently, we found it important to position the teaching of evidence-based mental health within a human context, and we often began our teaching from the perspective of an individual human problem. In our course, we asked the residents to each identify a clinical problem currently facing them (often focused upon a person in their treatment) and to undertake a search of the literature to decide on a course of action integrating research and clinical information relative to the problem they selected. The use of such problem-based learning approaches roots the material in a real-life clinical context and demonstrates that sophisticated evidence-based practice is humanistic. Pedagogical wisdom also recommends use of the “teachable moment,” i.e., availing new knowledge to the learner at a time when the information is immediately needed (and likely to be retained).

Residents expressed the concern that they received messages from clinical settings and supervisors that were often at odds with the evidence-based paradigm, emphasizing clinical lore over research evidence as a guide to practice. Consequently, exposure to our course helped create cognitive dissonance. It is problematic that when in such a state, one is apt to disqualify the information source that delivers fewer reassuring certainties (in this case, the evidence-based practice course). Therefore, we explicitly discussed the practical integration of evidence-based and traditional clinical approaches. We stressed that (1) residents will
need to establish a modus vivendi with regard to the paradigms of the academic and clinical settings; (2) there are legitimate arguments for the role of intuitive problem solving in clinical practice (Tanenbaum, 1993); and (3) it was never the intention of the evidence-based “movement” to entirely supplant the intuitive and experience-based clinical paradigm (Evidence-Based Medicine Working Group, 1992).

Several years ago, we formulated a theoretical schema to address this task of epistemological integration (Goldner & Bilsker, 1995), one which draws a distinction between *phronesis* (clinical judgment in a particular case) and *techne* (knowledge of the general laws governing types of disorders): “The evidence-based paradigm would alter the emphasis on these two modes of thinking in psychiatry: too much weight has been placed on phronesis, too little on techne. This is not to say that phronesis should be replaced by techne. To argue that more effective psychiatric practice would result from better utilization of its empirical base does not imply that clinical judgement should be replaced. Rather, there needs to be a better balance between the two modes of problem solving.” We found that examples in clinical practice help to bring this issue into focus, such as the discussion of effective therapeutic intervention for suicidal crises presenting in a psychiatric emergency unit (Bilsker & Forster, 2003). Examples such as this provide an opportunity to examine relevant research, as well as gaps in that research, and to identify an approach that harmonizes empirical knowledge and clinical wisdom.

We also addressed this concern by attempting to ensure that other instructors in the residency program taught their sections of the curriculum within the evidence-based paradigm. Our course immediately preceded core instruction in clinical syndromes and provided a foundation in critical appraisal that could then be applied to instructors’ subsequent seminars and lectures. We asked our fellow instructors to be receptive to the critical questions we encouraged the residents to pose. Over the longer term, it will be important to provide instruction in evidence-based practice for mental health practitioners in the form of continuing professional development. As clinical supervisors come to share the basic tenets of this approach, they will be in a position to reinforce the course material in a powerful way.

Some residents felt intimidated by the breadth of material associated with research design and statistical methodology. Often, they had received only cursory instruction in these areas prior to entering the residency program, and the concepts were quite foreign.

We responded to this concern by setting realistic goals for what could be learned; we did not want to set up a failure experience likely to alienate these future practitioners from the whole endeavor of integrating reliable evidence into their practice. We made explicit that most residents will not become researchers or methodologists, and instead we sought to help them become informed consumers of evidence. Our aims were modest; residents should be able to sift through the torrent of data they will receive, and distinguish the best from the worst evidence. As one of our instructors was wont to say, “The goal is to install a crap detector.” We identified the range of concepts to be covered. This served to focus teaching efforts on the domain of concepts truly necessary in order to be an informed consumer of evidence; we sought a basic familiarity with statistical and methodological concepts, not the capacity to apply them to research design. In our course, basic concepts included:

- Classification of studies and publications and assessment of levels of evidence
- The hypothesis-testing/falsificationist model of research
Randomization
Control groups
Blinding
The use of statistical tests
Statistical power and how it can be determined
Study design
Justification of conclusions

The latter topic was emphasized, since many competently designed studies in mental health draw conclusions that exaggerate or misstate the findings, underemphasize negative results, or apply faulty logic (Bilsker, 1996).

We clearly specified the required skill set. Three skills were delineated as necessary for evidence-based practice. First, one must be able to search for empirical studies and reviews. This demands the capacity to clearly state the question of interest (e.g., a recent review of brief therapeutic interventions by Dulmus and Wodarski, 2002, identified six critical questions requiring research evidence) and to effectively access the research literature. Being comfortable with searching databases on the Internet is essential in the current context: The aim is not to produce computer enthusiasts, but to ensure sufficient facility with search procedures for the technology to be transparent to the process of seeking knowledge. Second, one must be able to critically read studies for design adequacy and logical interpretation of findings. This skill rests not only upon knowledge of methodological and statistical issues, but more basically upon the adoption of a skeptical attitude toward research findings and clinical generalizations. It takes some effort to overcome students’ tendency to be so impressed by the “scientific” style of journal articles as to attribute a sort of infallibility to assertions made in this form. Furthermore, psychiatry residents must learn to avoid the seductive pitfall of confusing the trappings of scientific practice (physiological measures, sophisticated technology) with its true defining characteristics (rigorous research design and logically interpreted findings). We have had to stress the point that a carefully designed and logically interpreted study of treatment outcome for existential therapy is more scientific than a poorly designed and overinterpreted study of cerebral atrophy in schizophrenia. Third, one must be able to decide whether the literature supports a particular treatment approach. This involves reasoning out the application of the research data to the clinical problem and making the commitment to believe the evidence, even when it contradicts a cherished theory or practice. Again, there is a question of adopting an epistemological attitude, rejecting dogmatism and scientism in favor of the flexible commitment to falsifiable theories that is the sine qua non of scientific thinking. The resident must develop a sense of humility, a realization that our hold on truth is partial, tentative, and open to revision.

An evident source of concern for the residents was the challenge to their previously held beliefs and commitments. To require that all beliefs be held in a tentative way and be subject to revision can threaten one’s sense of established expertise and even of professional identity. We found it helpful to openly discuss the issue of professional identity and the problems raised by the evidence-based paradigm. Such discussions helped to highlight the advantages of moving from an authoritative, infallible position to one of limited and revisable knowledge, acknowledged as such to the patient. For example, several residents raised the objection that patients are reassured (“develop hope”) by receiving a confident and definitive depiction of their disorder and its treatment. They wondered whether it would be in the patients’ best interests to present them with certainty and unwavering optimism, even
if not fully accurate. Our response to this was to point out that conveying confidence that goes beyond the evidence gives rise to unrealistic hope (the act of a charlatan, not an expert), that patients who do not recover after this definitive explanation may well feel betrayed, angry, and despairing, and that mental health professionals have an ethical obligation to communicate honestly with their patients.

To help counterbalance the discomfort that residents experienced in acknowledging the limits of knowledge, we found it important to engage the residents in the practice of successful evidence-based problem solving, thus fostering a sense of competence. We intentionally began the teaching with content that could be quickly incorporated and mastered. Similarly, our evaluation of the residents was accomplished in a manner that helped demonstrate the skills and knowledge that they had acquired during the course using an ecologically valid approach. Thus, the residents had an opportunity to appreciate the value of their developing capacity to evaluate evidence and communicate essential information to their patients in an accurate and respectful manner.

Participants in this course gave it high ratings for relevance and clarity and demonstrated substantial knowledge acquisition in their evaluations. But despite consistent indications of its value and effectiveness, the course was precipitously discontinued. Why? The training director held a strong affinity for long-term dynamic psychotherapy training and decided to add more of it and to cut the evidence-based practice course to make room in the curriculum. Practitioners of brief therapy, aware of the research evidence supporting time-limited interventions, may note the irony of this decision. Perhaps the greatest barrier to dissemination of evidence-based practice is the inertia of training institutions whose habitual teaching practices are more difficult to change than the attitudes and skills of individual practitioners.

We note that a new training direction, with greater emphasis on evidence-based practice, has recently been established and we anticipate renewal of the evidence-based practice course within the psychiatry curriculum.

**Summary**

Teaching evidence-based practice to mental health practitioners involves more than passing along a body of knowledge. We have attempted to convey that there are fundamental issues of professional value, identity, and philosophical approach that can, if not addressed, subvert the teaching process. Before mental health trainees and practitioners can learn evidence-based practice, they must see it as valuable and feasible. As mental health training programs gain experience and gradually surrender outmoded teaching priorities, they will become more adept at conveying to their students the rewards of evidence-based practice.

**References**


