Critical Thinking: Integral to Evidence-Based (Informed) Practice

The process and philosophy of evidence-based practice (EBP) as described by its originators, **is an educational and practice paradigm designed to decrease the gaps between research and practice to maximize opportunities to help clients and avoid harm** (Gray, 2001a, 2001b; Sackett, Richardson, Rosenberg, & Haynes, 1997; Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000; Straus, Richardson, Glasziou, & Haynes, 2005). It is assumed that professionals often need information to make important decisions, for example, concerning risk assessment or what services are most likely to help clients attain outcomes they value. **Critical thinking skills are integral to EBP** (e.g., see Gambrill, 2005; Jenicek & Hitchcock, 2005). **EBP as described by its originators involves "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual [clients]"** (Sackett, et al., 1997, p. 2). It requires **"the integration of the best research evidence with our clinical expertise and our [client's] unique values and circumstances"** (Straus, et al., 2005, p. 1). It is designed to break down the division between research, practice, and policy, emphasizing the importance of attention to ethical issues including drawing judiciously and conscientiously on practice and policy-related research findings.

Best research evidence refers to valid and clinically or policy-relevant research. Clinical expertise refers to use of practice skills, including effective relationship skills, and the past experience of individual helpers to rapidly identify each client's unique circumstances, and characteristics including their expectations and "their individual risks and benefits of potential interventions . . . "(p. 1). It is drawn on to integrate information from these varied sources (Haynes, Devereaux, & Guyatt, 2002).

Without clinical expertise, practice risks becoming tyrannized by external evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual

[client]. Without current best external evidence, practice risks becoming rapidly out of date, to the detriment of [clients] (Sackett, et al., 1997, p. 2).

Client values refer to "the unique preferences, concerns and expectations each [client] brings to a clinical encounter and which must be integrated into clinical decisions if they are to serve the [client]" (Sackett, Strauss, Richardson, Rosenberg, & Haynes, 2000, p. 1). Evidence-based practice arose as an alternative to authority-based practice in which decisions are based on criteria such as consensus, anecdotal experience, and tradition (see Box 1.7). It describes a philosophy as well as an evolving process designed to forward effective use of professional

judgment in integrating information about each client's unique characteristics, circumstances, preferences, and actions with external research findings. "It is a guide for thinking about how decisions should be made" (Haynes, et al., 2002). Critical thinking knowledge skills, and values are integral to evidence-informed practice and policy. Although the philosophical roots of EBP are old, its blooming as an evolving process attending to evidentiary, ethical, and application issues in all professional venues (education, practice and policy as well as research) is fairly recent, facilitated by the Internet revolution. Codes of ethics of the American Psychological Association, American Medical Association and National Association of Social Workers as well as other professional organizations, obligate professionals to consider practice- related research findings and inform clients about them. **Although the term EBP can be mistaken to mean only that the decisions made are based on evidence of their effectiveness, its use does call attention to the fact that available evidence may not be used or the current state of**

ignorance in the field may not be shared with clients. It is hoped that professionals who consider related research findings regarding decisions and inform clients about them will provide more effective and ethical care than those who rely on criteria such as anecdotal experience, available resources, or popularity. **Some people prefer the term evidence-informed practice** (Chalmers, 2004). Evidence-based practice requires professionals to search for research findings related to important practice and policy decisions and to share what is found (including nothing) with clients. It highlights the uncertainty involved in making decisions and attempts to give both helpers and clients the knowledge and skills they need to handle this uncertainty constructively. Evidence-informed practice is designed to break down the division between research and practice, for example, emphasizing the importance of clinicians' critical appraisals of research and

developing a technology to help them to do so; "the leading fi gures in EBM [evidence-based medicine] . . . emphasized that clinicians had to use their scientific training and their judgment to interpret [guidelines] and individualize care accordingly" (Gray, 2001a, p. 26). Steps in EBP include the following:

Step 1: Converting information needs related to practice and policy decisions into well-structured questions. Step 2: Tracking down, with maximum effi ciency, the best evidence with which to answer them. Step 3: "Critically appraising that evidence for its validity (closeness to the truth), impact (size of the effect), and applicability (usefulness in our clinical practice)" (Straus, et al., 2005, p. 4). Step 4: "Integrating the critical appraisal with our clinical expertise and with our [clients'] unique" characteristics and circumstances (e.g., Is a client similar to those studied? Is there access to services needed?). Step 5: "Evaluating our effectiveness and efficiency in executing steps 1 to 4 and seeking ways to improve them both for next time").

Reasons for the Creation of Evidence-Based Practice

A key reason for the creation of EBP was the discovery of gaps showing that professionals are not acting systematically or promptly on research findings. There were wide variations in practices (Wennberg, 2002 There was a failure to start services that work and to stop services that did not work or harmed clients (Gray, 2001a, 2001b). Economic concerns were another factor. Inventions in technology were key in the origins of EBP such as the Web revolution that allows quick access to databases. Practitioners who have access to a computer and a modem can now track down research related to decisions they make in real time. Relevant, well-organized databases are rapidly increasing. The development of the systematic review was another key innovation. Meta-analyses and systematic reviews (research syntheses) make it easer to discover evidence related to decisions. The Cochrane and Campbell Databases provide rigorous reviews regarding thousands of questions. Yet another origin was increased recognition of the fl awed nature of traditional means of knowledge dissemination such as texts, editorials, and peer review. Gray (2001b) describes peer review as having "feet of clay" (p. 22). Also, there was increased recognition of harming in the name of helping. Gray (2001b) also notes the appeal of EBP both to clinicians and to clients.

The Evidence-Based Practices (EBPs)

The most popular view is defining EBP as considering practice-related research in making decisions including using practice guidelines or requiring practitioners to use empirically based treatments (Norcross, Beutler, & Levant, 2006; Reid, 2002). Rosen and Proctor (2002) state that "we use evidence-based practice here primarily to denote that practitioners will select interventions on the basis of their

empirically demonstrated links to the desired outcomes" (p. 743). Making decisions about individual clients is much more complex. There are many other considerations such as the need to consider the unique circumstances and characteristics of each client as suggested by the spirited critiques of practice guidelines and manualized treatments (e.g., Norcross, Beutler, & Levant, 2006). Practice guidelines are but one component of EBP, as can be seen by a review of topics in the book by Sackett et al. (2000), Evidence-Based Medicine; they are discussed in one of nine chapters (other chapters focus on diagnosis and screening, prognosis, therapy, harm, teaching methods, and evaluation). The broad view of EBP involves searching for research related to important decision and sharing what is found, including nothing, with clients. It involves a search not only for knowledge but also for ignorance. Such a search is required to involve clients as informed participants. And client values and expectations are vital to consider.

The Propagandistic Approach

Many descriptions of EBP in the literature could be termed business as usual, for example, continuation of unrigorous research reviews regarding practice claims, inflated claims of effectiveness, lack of attention to ethical concerns such as involving clients as informed participants, and neglect of application barriers. A common reaction is relabeling the old as new (as EBP)—using the term evidence-based without the substance, for example, labeling uncritical reviews as evidence-based. (See, for example, Oliver's (2006) critique of Body Mass Index as "evidence-based" (p. 28). A key choice is thus how to view EBP—whether to draw on the broad philosophy and evolving process of EBP as described by its originators as a way to handle the inevitable uncertainty in making decisions in an informed, honest manner sharing ignorance as well as knowledge, or to use one of the other approaches described (Gambrill, 2006). The choice made has implications not only for clients, practitioners, and administrators, but also for researchers and educators.

From Critical Thinking: What it is and Why it is important

Gambrill & Gibbs