

**Section I** \_\_\_\_\_

***ASSESSMENT AND INTERVENTION  
OVERVIEW***

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## Chapter 1

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# ***EVIDENCE-INFORMED PRACTICE***

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Evidence-based practice (EBP) describes a philosophy and process designed to forward effective use of professional judgment in integrating information regarding each client's unique circumstances and characteristics, including their preferences and actions, and external research findings. It involves the "integration of best research evidence with clinical expertise and [client] values" (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000, p. 1):

Without clinical expertise, practice risks becoming tyrannized by external evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient. Without current best external evidence, practice risks becoming rapidly out of date, to the detriment of patients. (Sackett, Richardson, Rosenberg, & Haynes, 1997, p. 2)

Evidence-informed practice is a guide for thinking about how decisions should be made (Haynes, Devereaux, & Guyatt, 2002). It requires 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 is a process for handling the uncertainty surrounding decisions that must be made in real life, in real time. Sources of uncertainty include limitations in current knowledge, lack of familiarity with what knowledge is available, and difficulties in distinguishing between personal ignorance and lack of competence and actual limitations of knowledge (Fox & Swazy, 1974). Uncertainties may be related to lack of information about problem-related causes, clients' ambivalence about pursuit of certain goals, and whether resources are available to help clients. A willingness to acknowledge that "I don't know," combined with taking steps to see if needed information is available, increases the likelihood that important uncertainties can be decreased or identified (Chalmers, 2004). This helps us to honor ethical obligations to involve clients as informed participants.

Evidence-informed practice involves a shift in paradigms. Intuition and unsystematic clinical expertise are considered insufficient grounds on which to make decisions. On the other hand, the "value-laden nature of clinical decisions" (Guyatt & Rennie, 2002, p. 4) implies that we cannot rely on evidence alone:

Thus, knowing the tools of evidence-based practice is necessary but not sufficient for delivering the highest quality of [client] care. In addition to clinical expertise, the clinician requires compassion, sensitive listening skills, and broad perspectives from the humanities and social sciences. These attributes allow understanding of [clients' concerns] in the context of their experience, personalities, and cultures. (p. 9)

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... any external guideline must be integrated with individual clinical expertise in deciding whether and how it matches the [client's] clinical state, predicament, and preferences and thus whether it should be applied. (Sackett et al., 1997, p. 2)

The philosophy of evidence-based practice encourages practitioners to be effective advocates for their clients: “physicians concerned about the health of their patients as a group, or about the health of the community, should consider how they might contribute to reducing poverty” (Guyatt & Rennie, 2002, p. 9). The National Association of Social Workers (NASW) encourages social workers to “Stand up for others” (*NASW News*, 2006, p. 11). Service is the first value described in NASW’s Code of Ethics (1999). A key characteristic of EBP is breaking down the division between research and practice, for example, highlighting the importance of clinicians critically appraising research reviews and developing a technology to help them do so: “the leading figures in EBM... emphasized that clinicians had to use their scientific training and their judgment to interpret [guidelines] and individualize care accordingly” (Gray, 2001b, p. 26).

Although its philosophical roots are old, the blooming of EBP as a process attending to evidentiary, ethical, and application issues in all professional venues (education, practice/policy, and research), is fairly recent, facilitated by the Internet revolution. Critical thinking is integral to this process. In both critical thinking as well as EBP, attention is given to ethical issues. If we examine the intellectual traits inherent in critical thinking suggested by Paul (1993) such as courage, integrity, and perseverance, we see that they reflect the philosophies of EBP described by the originators of EBP. Honesty and transparency (clear description of what is done to what effect) are emphasized in both. This applies to all venues of interest in the helping professions: professional education, practice and policy (what is done to what effect), and related research (its design, conduct, and reporting).

Evidence-based practice and health care arose because of troubling gaps between available knowledge and what is used by professionals. It suggests and explores ways to decrease gaps both at the level of clinical practice and decision making about groups or populations, for example, purchasing services (Gray, 2001a, 2001b). It is as much about the ethics of educators and researchers as it is about the ethics of practitioners and agency administrators. Gray (2001a) suggests that, at present, the helping process has the following characteristics:

1. Overenthusiastic adoption of interventions of unproven efficacy or even proven ineffectiveness;
2. Failure to adopt interventions that do more good than harm at a reasonable cost;
3. Continuing to offer interventions services demonstrated to be ineffective;
4. Adoption of interventions without adequate preparation such that the benefits demonstrated in a research setting cannot be reproduced in the ordinary service setting;
5. Wide variation in the rates at which interventions are adopted or discarded. (p. 366)

Descriptions of EBP differ in their breadth and attention to ethical issues ranging from the broad, systemic philosophy and related evolving technology envisioned by its originators (e.g., Gray, 1997; Sackett et al., 1997) to narrow views (use of practice guidelines) and total distortions (Gambrill, 2003). For example, many descriptions of evidence-based

decision making ignore hallmarks of this process such as involving clients as informed participants. Given these many different views, it is important to review the vision of EBP and health care as described by its creators. Otherwise, potential benefits to clients and professionals may be lost. Recently, more attention has been given to client preferences and actions because what clients do (e.g., carry out agreed-on tasks or not) often differs from their stated preferences and estimates of preferences are often wrong (Haynes et al., 2002).

EBP describes a process for and a new professional educational format (problem-based learning) designed to help practitioners to link evidentiary, ethical, and application issues. It is assumed that professionals often need information to make decisions, for example, concerning risk assessment or what services are most likely to help clients attain outcomes they value. Sackett et al. (1997) estimated that about two questions arise for every three patients physicians see and that 30% of all questions remain unanswered (p. 8). We do not know how many questions arise in the course of other professionals' work or how many of these remain unanswered. As Gray (2001a, p. 354) suggests, when evidence is not used, important failures in decision making occur:

- Ineffective interventions are introduced;
- Interventions that do more harm than good are introduced;
- Interventions that do more good than harm are not introduced;
- Interventions that are ineffective or do more harm than good are not discontinued.

Clinical expertise includes use of effective relationship skills and the experience of individual helpers to rapidly identify each client's unique circumstances, characteristics, and "their individual risks and benefits of potential interventions and their personal values and expectations" (Sackett et al., 2000, p. 1). Using clinical expertise, practitioners integrate information about a client's characteristics and circumstances with external research findings, client expectations and values, and their preferences and actions (Haynes et al., 2002; Sackett et al., 1997). Sackett and his colleagues (1997) suggest that: "Increased expertise is reflected in many ways, but especially in more effective and efficient [assessment] and in the more thoughtful identification and compassionate use of individual [clients'] predicaments, rights and preferences in making clinical decisions about their care" (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 et al., 2000, p. 1). Evidence-based health care refers to use of best current knowledge as evidence in decision making about groups and populations (see Gray, 2001a). Professional codes of ethics call for key characteristics of EBP such as drawing on practice- and policy-related research and involving clients as informed participants.

## **AN ALTERNATIVE TO AUTHORITY-BASED PRACTICE**

Evidence-based decision making arose as an alternative to authority-based decision making in which consensus, anecdotal experience, or tradition are relied on to make decisions (see Table 1.1).

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**Table 1.1 Differences between Authority-Based and Evidence-Based Practitioners**

Authority-Based Decision Making	Evidence-Based Decision Making
Clients are not informed or are misinformed.	Clients are involved as informed participants.
Ignores client preferences (e.g., “We know best.”).	Seeks and considers client values and preferences.
Does not pose specific questions about important decisions that must be made and does not search for and critically appraise what is found and share results with clients.	Poses clear questions related to information needs, seeks related research findings, critically appraises them, and shares what is found with clients and others.
Motivated to appear well informed, to preserve status and reputation.	Motivated to help clients and be an honest and competent broker of knowledge and ignorance.
Ignores errors and mistakes.	Seeks out errors and mistakes; values criticism as vital for learning.
Accepts practice- and policy-related claims based on misleading criteria such as tradition and expert consensus.	Relies on rigorous criteria to appraise practice claims and select practices and policies (e.g., those that control for biases).
Relies solely on self-report of clients or anecdotal observations to evaluate progress.	Uses objective as well as subjective measures to evaluate progress with a focus on outcomes of concern to clients.

Although misleading in the incorrect assumption that EBP means only that decisions made are based on evidence of their effectiveness, use of the term does call attention to the fact that available evidence may not be used or the current state of ignorance 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 relying on criteria such as anecdotal experience, available resources, or popularity. The following examples illustrate reliance on authority-based criteria for selection of service methods:

Ms. Riverton has just been to a workshop on eye movement desensitization therapy. The workshop leader told the participants that this method “works and can be used for a broad range of problems.” Ms. Riverton suggests to her supervisor at the mental health clinic where she works that agency staff should use this method. When asked why, she said because the workshop leader is a respected authority in the field.

Mr. Davis read an editorial that describes the DARE programs as very effective in decreasing drug use. No related empirical literature was referred to. He suggests to his agency that they use this method.

In the first example, the authority of a workshop leader is appealed to. In the second, the authority of an author of an editorial is appealed to. Evidence-based decision making involves use of quite different criteria. A key one is information about the accuracy of practice and policy-related claims. EBP draws on the results of systematic, rigorous, critical appraisals of research related to different kinds of questions such as “Is eye movement desensitization effective for certain kinds of problems? Are DARE programs effective?” For example, review groups in the Cochrane and Campbell Collaborations prepare comprehensive, rigorous reviews of all research related to a question (see later descriptions).

### THREE PHILOSOPHIES OF EVIDENCE-BASED PRACTICE

Evidence-based practice and social care involve a philosophy of ethics of professional practice and related enterprises such as research and scholarly writing, a philosophy of science (epistemology—views about what knowledge is and how it can be gained), and a philosophy of technology. Ethics involves decisions regarding how and when to act; it involves standards of conduct. Epistemology involves views about knowledge and how to get it or if we can. The philosophy of technology involves questions such as: Should we develop technology? What values should we draw on to decide what to develop? Should we examine the consequences of a given technology? Evidence-informed practice encourages the integration of research and practice, for example, by highlighting the importance of clinicians critically appraising research reviews and developing a technology to help them to do so; “the leading figures in EBM . . . emphasized that clinicians had to use their scientific training and their judgment to interpret [guidelines] and individualize care accordingly” (Gray, 2001b, p. 26). It encourages clinicians to think for themselves—to develop critical appraisal skills. It offers practitioners and administrators a philosophy that is compatible with obligations described in professional codes of ethics as well as an evolving technology for integrating evidentiary, ethical, and practical issues. The uncertainty associated with decisions is acknowledged, not hidden.

EBP requires considering research findings related to important practice/policy decisions and sharing what is found (including nothing) with clients. Transparency and honesty regarding the evidentiary status of services is a hallmark of this philosophy. For example, on the back cover of the seventh edition of *Clinical Evidence* (2002), the continually updated book distributed to physicians, it states that “it provides a concise account of the current state of knowledge, ignorance, and uncertainty about the prevention and treatment of a wide range of clinical conditions.” In what books describing practices in psychology, psychiatry, or social work do we find such a statement? To the contrary, we find books titled *What Works in Child Welfare* (Kluger, Alexander, & Curtis, 2002) and *A Guide to Treatments That Work* (Nathan & Gorman, 2002).

#### Steps in Evidence-Based Practice

Steps in EBP include the following:

1. Convert information needs related to practice decisions into answerable questions.
2. Track down, with maximum efficiency, the best evidence with which to answer them.
3. Critically appraise that evidence for its validity, impact (size of effect), and applicability (usefulness in practice).
4. Integrating the critical appraisal with our clinical expertise and with our client’s unique characteristics and circumstances, including their preferences and values. This involves deciding whether evidence found (if any) applies to the decision at hand (e.g., is a client similar to those studied, is there access to services described) and considering client values and preferences in making decisions as well as other applicability.
5. Evaluate our effectiveness and efficiency in carrying out steps 1 to 4 and seek ways to improve them in the future (Straus, Richardson, Glasziou, & Haynes, 2005, pp. 3–4).

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Questions that arise in the fourth step include: Do research findings apply to my client? That is, is a client similar to clients included in related research findings? Can I use this practice method in my setting (e.g., Are needed resources available)? If not, is there some other access to programs found to be most effective in seeking hoped-for outcomes? What alternatives are available? Will the benefits of service outweigh harms of service for this client? What does my client think about this method? Is it acceptable to clients? What if I don't find anything (Glasziou, Del Mar, & Salisbury, 2003)? What is the number needed to treat, that is, how many people must receive a service for one person to be helped? (See Sinclair, Cook, Guyatt, Pauker, & Cook, 2001.) What is the number needed to harm? Evidence-informed practitioners take advantage of efficient technology for conducting electronic searches to locate the current best evidence regarding a specific question; information literacy and retrievability are emphasized (Gray, 2001a, 2001b).

### DIFFERENT KINDS OF QUESTIONS

Different questions require different kinds of research methods to critically appraise proposed assumptions (e.g., Greenhalgh, 2006; Guyatt & Rennie, 2002; Straus et al., 2005). These differences are reflected in the use of different “quality filters” to search for research findings that reflect the particular terms associated with research likely to offer critical tests of questions. Kinds of questions include the following:

- *Effectiveness*: Do job training programs help clients get and maintain jobs?
- *Prevention*: Do Head Start programs prevent school drop out?
- *Screening (risk/prognosis)*: Does this measure accurately predict suicide attempts?
- *Description/assessment*: Do self-report data provide accurate descriptions of parenting practices?
- *Harm*: Does (or will) this intervention harm clients?
- *Cost*: How much does this program cost compared to others?
- *Practice guidelines*: Are these practice guidelines valid and are they applicable to my client/agency/community?
- *Self-development*: Am I keeping up-to-date? How can I keep up-to-date?

Sackett et al. (1997, 2000) suggest posing four-part questions that describe the population of clients, the intervention you are interested in, what it may be compared to (including doing nothing), and hoped-for outcomes (PICO questions). Gibbs (2003) refers to these as COPEs questions. They are **C**lient **O**riented. They are questions clinicians pose in their daily practice that affect clients' welfare. Second, they have **P**actical importance. They concern problems that arise frequently in everyday practice and that are of concern to an agency. For example, child protective service workers must assess risk. Asking the question about what types of clients present the greatest immediate risk for child abuse is a critical one. Third, COPEs (PICO) questions guide an **E**lectronic search for related research findings. The process of forming a specific question often begins with a vague general question and then proceeds to a well-built question. Fourth, hoped-for outcomes are identified. Synonyms can be used to facilitate a search (e.g., see Gibbs, 2003; Glasziou

et al., 2003). For example, if abused children are of concern, other terms for this may be “maltreated children,” “neglected children,” “mistreated children.” Sackett et al. (1997) suggest that a well-formed question should meet the following criteria:

- It concerns a problem of concern to clients.
- It affects a large number of clients.
- It is probably answerable by searching for related research findings.

A careful search requires actively seeking information that challenges or disconfirms our assumptions as well as for information that supports them. In addition to the development of the systematic review, the availability of the Internet has revolutionized the search for information making it more speedy and more effective. The Cochrane Collaboration prepares, maintains, and disseminates high-quality reviews of research related to a particular practice question. The Cochrane Library is an electronic publication designed to supply high-quality evidence to those providing and receiving care and those responsible for research, teaching, funding, and administration at all levels. The Cochrane database includes thousands of systematic reviews. It is distributed on a subscription basis. Abstracts of reviews are available without charge and can be searched. Both published and unpublished content (the gray literature) is sought in all languages, and journals are hand-searched. Reviews are prepared by people who are also responsible for identifying and incorporating new evidence as it becomes available. Entries include completed reviews, available in full text, as well as protocols that are expressions of intent and include a brief outline of the topic and a submission deadline. Reviews are prepared and maintained, based on standards in *The Reviewers' Handbook*, which describes the process of creating Cochrane systematic reviews (Higgins & Green, 2005). It is revised often to ensure that it remains up to date. The Cochrane Collaboration focuses on health concerns, however, many reviews are relevant to a wide variety of professionals. Examples are “Psychoeducation for Schizophrenia” (Pekkala & Merinder, 2004) and “Psychological Debriefing for Preventing Posttraumatic Stress Disorder” (Rose, Bisson, Churchill, & Wessely, 2000). The Cochrane Library also includes a Controlled Trials Register and the Cochrane Review Methodology Database that is a bibliography of articles concerning research synthesis and practical aspects of preparing systematic reviews.

The Campbell Collaboration, patterned after the Cochrane Collaboration, prepares reviews related to education, social intervention, and criminal justice. Coordinating groups include communication and dissemination, crime and justice, education, social welfare, and a methods group. Like the Cochrane Collaboration, detailed instructions are followed for preparing high-quality reviews, and reviews are routinely updated. They, like the Cochrane Collaboration, have an annual conference and both are attended by methodologists as well as those interested in particular problem areas ([www.campbellpenn.com](http://www.campbellpenn.com)).

## DIFFERENT STYLES OF EVIDENCE-BASED PRACTICE

Sackett and his colleagues (2000) distinguish among three different styles of EBP, all of which require integrating evidence with a client’s unique personal and environmental circumstances. All require step 4 (see prior list of steps in EBP) but they vary in how other

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steps are carried out. They suggest that for problems encountered on an everyday basis, you should invest the time and energy necessary to carry out both searching and critical appraisal of reports found. For level 2 (problems encountered less often), they suggest that you seek out critical appraisals already prepared by others who describe and use explicit criteria for deciding what evidence they select and how they decide whether it is valid. Here, step 3 can be omitted and step 2 restricted to sources that have already undergone critical appraisal. A third style applies to problems encountered very infrequently in which we “blindly seek, accept, and apply the recommendations we receive from authorities” (p. 5). As they note, the trouble with this mode is that it is “blind” to whether the advice received from the experts “is authoritative (evidence-based, resulting from their operating in the appraising mode) or merely authoritarian (opinion-based, resulting from pride and prejudice)” (p. 5). One clue they suggest to distinguish which style is being used is uncritical documentation with a reluctance to describe what is in the documentation. Lack of time may result in using style 2 with most problems. Guyatt and Rennie (2002) recommend the highest possible skill levels: “Only if you develop advanced skills in interpreting the [practice- and policy-related] literature will you be able to determine the extent to which these attempts are consistent with the best evidence. Second, a high level of EBP skills will allow you to use the original literature effectively, regardless of whether preappraised synopses and evidence-based recommendations are available” (p. 208).

### EXAMPLES OF EVIDENCE-BASED DECISION MAKING

Dr. Price works in a mental health crisis center. The administrator of this agency sent a memo around to staff that he had heard that brief psychological debriefing was effective in decreasing posttraumatic stress disorder following a crisis and suggested that his staff use this method. Dr. Price decided to see if this was accurate. He formed the following question: In clients experiencing a potentially traumatic event, is brief (one hour) psychological debriefing compared to no service more effective in preventing post traumatic stress disorder? This is an effectiveness question. He looked in the Cochrane Database and found the systematic review prepared by Rose et al. (2000). To his surprise, this review concluded that not only was this method not effective, there was some indication that it had harmful effects; one study reported that those receiving such counseling were *more* likely to experience stressful reactions a year later. Based on this review, he sent an e-mail to his colleagues questioning the use of this method for clients.

Richard works in a child protection agency that requires him to use a risk assessment measure to estimate the likely recurrence of child abuse among parents alleged to have abused their children. The method used by his agency is a consensus-based instrument, that is, it is based on the opinions of a group of experts on what they consider risk factors. His question is as follows: Among parents alleged to have abused their children, are actuarial- compared to consensus-based measures most accurate in predicting the likelihood of future abuse? Notice again that this is a four-part question: (1) a client group, (2) a particular predictive measure, (3) another kind of risk measure, and (4) the hoped for outcome. He looked in [www.childwelfare.com](http://www.childwelfare.com) and located an article by Baird and Wagner (2000) that compared the reliability and validity of these two kinds of risk measures. This article concluded that the actuarial method was the most accurate. Actuarial measures are

based on empirical relationships between certain factors and the likelihood of an outcome such as abuse.

These examples illustrate distinctive features of evidence-informed decision making. The clinicians posed well-structured questions related to their information needs that guided an effective, efficient electronic search. Searches can be done in the office with modem-equipped computers using appropriate search methods including Boolean logic (and/or), relevant databases, and quality filters designed to locate the best evidence for a particular kind of question. Critical appraisal skills are used to review what is found (see, e.g., Altman et al., 2001). Many sources are available to guide this appraisal that include user-friendly checklists for different kinds of questions (e.g., Greenhalgh, 2006). A search for research findings may reveal that a practice method is harmful. We may discover that there is no research that critically appraises the effectiveness of a practice or policy or that the research is too weak to draw an inference. All these are findings related to important decisions that must be made. If no research findings are available that provide guidance, decisions must be based on other criteria, such as an empirically grounded practice theory. This is a finding and is shared with clients.

Implications of evidence-informed practice for assessment include: (a) drawing on available problem-related research, for example, about related factors; (b) selecting empirically grounded assessment frameworks that reflect research findings regarding outcomes of interest; (c) using reliable, valid assessment measures including measures designed to assess risk of certain outcomes, such as suicide or child maltreatment; (d) avoiding common errors in integrating data from multiple sources; and (e) involving clients as informed participants and considering their values and preferences. Implications for intervention include using practices and policies found via critical appraisal to do more good than harm and accurately informing clients concerning the evidentiary status of methods used. Implications for evaluation include using methods that accurately reflect degree of change and keeping track of progress on an ongoing basis. The more one reads about current-day practices in the helping professions, the clearer it is that helping efforts do not have the characteristics of EBP. Literature suggests that professionals do not draw on practice-related research findings to inform practice decisions (see, e.g., Mullen & Bacon, 2004; Rosen, Proctor, Morrow-Howell, & Staudt, 1995). Not keeping up with new research findings related to important decisions renders the practitioner's knowledge increasingly out of date. As a result, decisions may be made that harm rather than help clients (e.g., see Jacobson, Foxx, & Mulick, 2005; Lilienfeld, Lynn, & Lohr, 2003; Ofshe & Watters, 1994). Many clinicians do not honor obligations described in professional codes of ethics regarding informed consent (e.g., see Braddock, Edwards, Hasenberg, Laidley, & Levinson, 1999). Lack of transparency regarding limitations of research remains common as does the publication of incomplete, uncritical reviews that provide an overly rosy picture of alleged effectiveness of practice methods (Schulz, Chalmers, Hayes, & Altman, 1995).

## ORIGINS OF EVIDENCE-BASED DECISION MAKING

Sackett and his colleagues (2000) suggest four realizations made possible by five recent developments for the rapid spread of evidence-based medicine. Realizations include (1) practitioner need for valid information about decisions they make; (2) the inadequacy

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of traditional sources for acquiring this information (e.g., because they are out of date, frequently wrong, overwhelming in their volume, variable in their validity); (3) the gap between assessment skills and clinical judgment “which increase with experience and our up-to-date knowledge and performance which decline” (p. 2); and (4) lack of time to locate, appraise, and integrate this evidence (p. 2). Traditional forms of continuing education were not effective (O’Brien et al., 2001). There were increasing gaps between information available on the Internet that could be of value to clients and clinicians in making informed decisions and what was drawn on. Five developments allowed improvement in this state of affairs:

1. The development of strategies for efficiently tracking down and appraising evidence (for its validity and relevance);
2. The creation of systematic reviews and concise summaries of the effects of health care (epitomized by the Cochrane Collaboration);
3. The creation of evidence-based journals of secondary publication;
4. The creation of information systems for bringing the forgoing to us in seconds;
5. The identification and application of effective strategies for lifelong learning and for improving our clinical performance. (Sachett et al. 2000, p. 3)

### Study of Variations in Services Offered

EBP and health care originated in medicine in part because of variations in services offered and their outcomes (Wennberg, 2002). Variations in services naturally raise questions such as “Are they of equal effectiveness?” “Do some cause harm?”

### Gaps among Ethical, Evidentiary, and Application Concerns

Services found to be effective are often not used and services of little value are often offered. Although interlinked in professional codes of ethics and accreditation standards, ethical and evidentiary issues are often worlds apart in practice. Sheldon and Chilvers (2000) found that 18% of social workers surveyed ( $n = 2,285$ ) had read nothing related to practice within the past 6 months. If professionals are not familiar with the evidentiary status of alternative practices and policies, they cannot pass this information on to their clients; they cannot honor informed consent obligations. If some alternatives are more effective than others in helping clients, and practice proceeds in ignorance of this information, clients are deprived of opportunities to achieve hoped-for outcomes. How can clients exercise self-determination if they are uninformed or misinformed about the evidentiary status of recommended services? Currently, gaps between what research suggests is effective and what services are provided are hidden. For example, rarely do child protection staff compare services offered by agencies to which they refer clients for parent training with what research suggests is effective and share this information with clients. Clients are typically not informed that recommended services have not been critically tested or have been found to be ineffective or harmful.

### **Increased Attention to Harm in the Name of Helping**

The history of the helping professions shows that common practices thought to help people were found to harm them (e.g., see Blenkner, Bloom, & Neilson, 1971; McCord, 2003; Sharpe & Faden, 1998; Valenstein, 1986). Such reports increased awareness that services designed to help clients, including assessment measures, may result in negative effects. For example, routine use of mammograms results in a high rate of false positives with consequent unnecessary anxiety and invasive procedures such as biopsies for many individuals (Gigerenzer, 2002; Schwartz & Woloshin, 2007; Thornton, Edwards, & Baum, 2003).

### **Limitations of Traditional Methods of Knowledge Dissemination**

Gray (2001a) highlights the role of troubling gaps between obligations of researchers to report limitations of research, prepare systematic reviews, and accurately describe well-argued alternative views and what we find in published literature. We find:

- Inflated claims: Professional propaganda.
- Biased estimates of the prevalence of a concern: Propagandistic advocacy in place of careful weighting of evidence.
- Hiding limitations of research.
- Preparing fragmented, incomplete literature reviews.
- Ignoring counterevidence to preferred views.
- Ignoring well-argued alternative perspectives and related evidence.
- Pseudoinquiry: Poor match between questions addressed and methods used to address them (e.g., see Rubin & Parrish, 2007).
- Ad hominem rather than ad rem argument.
- Ignoring unique knowledge of clients and service providers in making decisions about the appropriateness of a practice guideline.

Poor quality research continues to appear in professional journals (Altman, 2002). There are many reasons for this including the special interests of those who fund research such as pharmaceutical companies and censorship of findings (e.g., see Angell, 2004; Bodenheimer, 2000).

In discussing the origins of EBP, Gray (2001b) emphasized the increasing lack of confidence in data of potential use to clinicians: peer review which he subtitled feet of clay; flaws in books, editorials, and journal articles. Examples include submission bias, publication bias, methodological bias, abstract bias, and framing bias. In place of critical, systematic reviews of research, we find incomplete, uncritical reviews (e.g., see Oxman & Guyatt, 1993). Most reviews do not tell us how they researched, where they searched, what criteria they used to review studies and do not search for published as well as unpublished reports. Conclusions drawn based on unsystematic reviews are often quite misleading. As Rosenthal (1994) suggests in his description of hyperclaiming (telling others that proposed research is likely to achieve goals that it will not) and causism (implying a causal relationship when none has been established), “Bad science makes for bad ethics” (p. 128). Chalmers

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(1990) argues that failure to accurately describe research methods used is a form of scientific misconduct.

**Evolution of the Systematic Review**

Recognition of limitations in narrative reviews of research related to practice questions encouraged development of the systematic review for synthesizing research findings (see Table 1.2). Such reviews “state their objectives, ascertain as much of the available evidence as possible, use explicit quality criteria for inclusion or exclusion of the studies found, use explicitly stated methods for combining data, [and] produce reports which describe the processes of ascertainment, inclusion and exclusion, and combining data” (Gray, 2001b, p. 24). (See Egger, Smith, & O’Rourke, 2001 as well as the *Cochrane Reviewers’ Handbook*.)

**The Internet Revolution**

As Gray (2001b) notes, “The Internet stimulated the development of a number of software tools which allowed international organizations such as the Cochrane Collaboration to function effectively” (p. 25). The Internet provides rapid access to research related to practice guidelines including databases that facilitate speedy searches. New search methods using Boolean terms (and/or) facilitate searches on the Internet.

**Other Factors**

Gray (2001b) attributes part of the appeal of EBP to clinicians and to clients:

It also came as a shock that even the knowledge, where it was available, was often deficient (or commonly not even utilized by doctors who had been left behind the knowledge frontier). They therefore welcomed EBM enthusiastically and it is remarkable how quickly that access to information has turned the table on professional expertise and power. It is no longer feasible to feign knowledge: patients are just as likely to have searched for the evidence before they consult a clinician. (p. 27)

**Table 1.2 Examples of Difference between Systematic Reviews and Traditional Reviews**

Traditional Reviews	Systematic Reviews
The search process is not described.	The search process is clearly described.
The review omits many related studies.	All currently available research related to a practice question, both published and unpublished in all languages, is sought.
Criteria used to review research regarding different kinds of practice questions are not described.	Criteria used to appraise research related to different kinds of practice questions are clearly described.
Criteria used to appraise the quality of studies are not rigorous.	Criteria used to appraise research are rigorous (e.g., Were evaluators of outcome blind to group assignment?).
Readers are not provided with sufficient information about each study to judge its quality for themselves.	Readers are provided with enough information about each study to judge its quality for themselves.
Claims of effectiveness and validity are inflated.	Claims are accompanied by descriptions of related evidence.

**Hallmarks and Implications of the Philosophy of Evidence-Based Practice and Care 15**

Economic considerations were a factor. No matter what system of care exists, resources are limited with subsequent pressures to use them justly and wisely including considering both individuals and populations (Do all residents with a particular need have access to similar quality care?). Gray (2001b) also notes the contributions of key individuals such as David Sackett (e.g., see Sackett et al., 1997) and the role of the National Health Service Research and Development Program in encouraging an evaluative culture.

**HALLMARKS AND IMPLICATIONS OF THE PHILOSOPHY OF EVIDENCE-BASED PRACTICE AND CARE**

The philosophy and related technology of EBP has implications for all individuals and institutions involved with helping clients, including educators, researchers, practitioners/policy makers, and those who provide funding. Research, practice, and educational issues are closely intertwined. For example, poor quality reviews of research related to practice and policy questions may result in bogus practice guidelines that result in poor quality services for clients. Clinicians may be misinformed about the evidentiary status of practice and policy claims and so harm rather than help clients. Hallmarks and implications are interrelated. For example, promotion of transparency contributes to both knowledge flow and honoring ethical obligations.

**Move Away from Authoritarian Practices and Policies**

The key contribution of EBP is moving from authority-based professions to those in which ethical obligations to clients and students are honored and critical appraisal and honest brokering of knowledge and ignorance thrive (Gambrill, 1999). A preference for authoritarian beliefs and actions is by no means limited to clinicians. It flourishes among researchers and academics as well. Examples include misrepresenting views, hiding limitations of research studies, ignoring counterevidence to preferred views, and not involving clients and clinicians as informed participants in decisions made (e.g., about whether to use a certain practice guideline). Indicators of the authority-based nature of practice include large gaps between what is said and what is done (e.g., professional codes of ethics and current practices and policies—basing decisions on criteria such as consensus and tradition, lack of informed consent, and censorship of certain kinds of knowledge such as variations in services and their outcomes; Gambrill, 2001).

**Honor Ethical Obligations**

Evidence-informed practice has ethical implications for practitioners and policy makers as well as for researchers and educators. Hallmarks include focusing on client concerns and hoped-for outcomes, attending to individual differences in client characteristics and circumstances, considering client values and expectations, and involving clients as informed participants in decision making (see prior list of steps). Ignoring practice- and policy-related research findings and forwarding bogus claims of effectiveness violates our obligation to provide informed consent and may result in wasting money on ineffective services, harming clients in the name of helping them, and forgoing opportunities to attain hoped-for outcomes. A striking characteristic of EBP and related developments is the extent to which clients are

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involved in many different ways (e.g., see Edwards & Elwyn, 2001; Entwistle, Renfrew, Yearley, Forrester, & Lamont, 1998; Entwistle, Sheldon, Sowden, & Watt, 1998). One is in the attention given to individual differences in client characteristics, circumstances, actions, values, and preferences in making decisions (e.g., see earlier description of EBP). Considerable attention has been devoted to creation of decision aids (O'Conner et al., 2001). A second is helping clients to develop critical appraisal skills. A third is encouraging client involvement in the design and critique of practice- and policy-related research (e.g., Hanley, Truesdale, King, Elbourne, & Chalmers, 2001). A fourth is attending to outcomes clients value and a fifth is involving them as informed participants. A sixth is recognizing their unique knowledge in relation to application concerns.

The client focused nature of evidence-informed decision making requires helpers to attend to client interests: What are *their* desired outcomes, What information would *they* like, what are *their* preferences regarding practices and policies? Sharpe and Faden (1998) describe the struggle in medicine, a continuing one, to focus on client outcomes and highlight how recent this focus is and what a contentious issue it has been and continues to be. A concern for involving clients in making decisions that affect their lives emphasizes the importance of informed (in contrast to uninformed or misinformed) consent. EBP involves sharing responsibility for decision making in a context of recognized uncertainty. Although professional codes of ethics call on practitioners to inform clients regarding risks and benefits of recommended services and alternatives, this is typically not done (e.g., see Braddock et al., 1999). Decisions concerning the distribution of scarce resources is a key ethical concern in the helping professions; this requires consideration of populations as well as individuals (Gray, 2001a). Decisions concerning populations may pose hardships for individual clients. EBP encourages programmatic research regarding error, both avoidable and unavoidable, its causes and consequences for clients and other involved parties, and exploration of methods designed to minimize avoidable errors including agency-wide risk management programs (e.g., see Reason, 1997, 2001). A careful review of the circumstances related to mistakes allows us to plan how to minimize avoidable ones. Such attention helps us to minimize harming in the name of helping.

### Making Practices, Policies, and Their Outcomes Transparent

Evidence-informed practice encourages transparency of what is done to what effect in all venues of interest including practice and policy, research, and professional education. It is a democratic endeavor in which clients are apprised of the evidentiary status of services (e.g., the likelihood that they will do more good than harm). There is candidness and clarity in place of secrecy and obscurity (Chalmers, 2003). These characteristics are at odds with authority-based practice (Chalmers, 1983; Gambrill, 1999). For example, is there evidence for the following claims:

- Scared straight programs decrease delinquency.
- Psychological debriefing prevents posttraumatic stress syndrome.
- Eyewitness testimony can be trusted.
- Genograms contribute to accurate assessment.
- Screening programs for depression do more good than harm.
- Anger management programs for adolescents are effective.

### Hallmarks and Implications of the Philosophy of Evidence-Based Practice and Care 17

Transparency calls for blowing the whistle on pseudoscience, fraud, quackery, and professional propaganda (see, e.g., Jacobson et al., 2005; Lilienfeld et al., 2003; Sarnoff, 2001). It will highlight gaps between resources needed to attain hoped-for outcomes as suggested by related research and what is used and thus may (and should) encourage advocacy on the part of clients and professionals for more effective services. It will reveal services that are ineffective, allowing a more judicious distribution of scarce resources (see Eddy, 1994a, 1994b). For example, why pay for unneeded training or ineffective services? It will highlight gaps between causes of client problems (e.g., poverty) and interventions used and promoted to have value (see, e.g., Lindsey's, 2004, critique of the residual nature of the child welfare system). Identification of gaps will suggest ways to rearrange resources. Transparency will reveal the extent to which different kinds of ethical obligations are met, such as involving clients as informed participants. It will reveal impossible tasks; consider the unrealistic expectation to "ensure" that no child in protective care be harmed. This cannot be done. Transparency encourages clear language that should discourage propagandistic ploys that hide what is done to what effect. There is no longer a need to veil the lack of evidentiary status for practices and policies, or the lack of focus on client outcomes and failure to consider client preferences.

Increased transparency also has implications for the conduct, reporting, and dissemination of research findings. It requires accurate description of well-argued alternative views and related evidence and encourages rigorous testing of claims. Biases intrude both on the part of researchers when conducting and reporting research and when preparing research reviews (e.g., see MacCoun, 1998) as well as on the part of practitioners when making decisions. The use of rigorous criteria to evaluate research studies is encouraged by the prevalence of incomplete reviews resulting in faulty conclusions that mislead both helpers and clients. EBP calls for candid descriptions of limitations of research studies and use of methods that critically test questions addressed; it calls for systematic reviews (see Cochrane and Campbell Collaborations protocols). A key contribution of EBP is discouraging inflated claims of knowledge that mislead involved parties and hinder the development of knowledge. Consider terms such as *well established* and *validated* that convey a certainty that is not possible. Bogus claims based on uncritical appraisals of related research hinder exploration and may result in harmful practices and policies.

#### **Encourage a Systemic Approach for Integrating Practical, Ethical, and Evidentiary Issues**

Evidence-informed practice describes a process designed to encourage integration of ethical, evidentiary, and application concerns. It advocates a systemic approach to improving the quality of services: (a) efforts to educate professionals who are lifelong learners, (b) involving clients as informed participants, (c) attending to management practices and policies that influence practice (i.e., evidence-based purchase of services), (d) considering the implications of scarce resources, and (e) attending to application challenges. Quality of services are unlikely to improve in a fragmented approach, that is, without attending to *all* links in the system of service provision. Gray (2001a, p. 354) suggests that performance (P) is directly related to an individual's motivation (M) and competence and inversely related to the barriers (B) that individual has to overcome:  $P = (M \times C)/B$ . EBP encourages the creation of tools and training programs designed to develop and encourage use of critical

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appraisal skills. Related literature describes a wide variety of efforts to address application concerns.

### Maximize Knowledge Flow

EBP and social care are designed to maximize knowledge flow. Exploring ways to diffuse and disseminate knowledge encourages knowledge flow and related literature is rich in the variety of efforts described. In a culture in which knowledge flow is free, puffery (inflated claims of knowledge) is challenged and such challenges are welcomed. Evidence-informed decision making emphasizes the importance of collaboration among interested parties including clients, and its advocates have actively pursued the development of a technology and political base to encourage this, for example, involving clients in the design and interpretation of research (Hanley, Truesdale, King, Elbourne, & Chalmers, 2001). Gray (2001a) notes that evidence-based organizations should include systems that are capable of providing evidence and promoting the use of evidence including both explicit (created by researchers) and tacit (created by clinicians, clients, and managers). Clinicians and clients are involved as informed participants—there is no privileged knowledge in the sense of not sharing information about the evidentiary status of recommended practices and policies. Such sharing poses a direct threat to those who forward bogus claims and carry out pseudo inquiry, perhaps to gain funding and maintain status. Benefits of a free, efficient, knowledge market include:

- Critical appraisal of knowledge claims.
- Honoring informed consent obligations.
- Increased staff moral because decisions will be more informed and staff are rewarded for sharing knowledge and are free to discuss problems including errors and learn from colleagues and others throughout the world.
- Increase in the ratio of informed to uninformed or misinformed decisions.
- Recognizing uncertainty. This is often swept under the rug resulting in blaming staff for not acting on knowledge that does not (or did not) exist.
- Reducing bogus claims of knowledge that may result in harm to clients among all parties including researchers. We often find little match between questions addressed and use of methods that can critically test them together with hiding limitations and inflated claims of effectiveness regarding what has been found.
- Lack of censorship of well-argued alternative views and counterevidence regarding popular views.

Identifying errors, mistakes, and related factors and using this information to minimize avoidable mistakes contributes to knowledge flow. Thus, we have an obligation to recognize and learn from our mistakes (Popper, 1998, pp. 64–65). We learn from our mistakes, and we lose valuable learning opportunities by overlooking opportunities to “educate our intuition” (Hogarth, 2001). Research regarding errors shows that systemic causes including quality of staff training and agency policies contribute heavily to mistakes and errors (Reason, 1997, 2001). Accountable complaint systems are another way to maximize knowledge flow. Evidence-informed agencies encourage knowledge flow by using services found to

maximize the likelihood of attaining outcomes clients value and not using services of unknown effectiveness or those found to do more harm than good.

## EDUCATIONAL IMPLICATIONS

The importance of developing professionals who are lifelong learners is highlighted by research that shows that the typical professional program produces graduates who do not keep up with the literature, and this results in knowledge becoming rapidly out of date, with all the implications of this for clients (Sackett et al., 2000). Problem-based learning (PBL) was initiated at the McMaster University Faculty of Health Sciences in Canada. This involves a totally different form of professional education in which students are placed in small groups of five or seven, together with a tutor who is trained in group process as well as in skills involved in evidence-informed practice such as posing well-structured questions and searching effectively and efficiently for related literature. This kind of problem-based learning in medicine has spread throughout the world. It provides repeated opportunities for corrective feedback that is so vital for learning. In the traditional format of education, students are given the *products* of the process of investigation rather than being involved in the *process* of creating the products themselves so that they can not only understand this process, but experience the excitement and the challenges of wrestling with problems that make a difference in the lives of their clients.

A problem focus grounds content squarely on practice concerns, highlights key decisions and related questions and options, and links curriculum areas in a manner required when making decisions “on-the-job” including research and practice, policy and practice, and knowledge about human behavior and the environment. It emphasizes the unstructured and uncertain nature of problem solving and provides repeated opportunities to help students learn how to handle this. Focusing on problems of concern to clients and/or significant others in no way implies that client strengths are overlooked. It would be a poor problem solver indeed who did not take advantage of available resources. Yet another implication is describing methodological and conceptual controversies related to topics discussed so students are informed and thus can accurately inform clients as required by our code of ethics. That this does not occur is suggested by reviews of course outlines (e.g., see Lacasse & Gomory, 2003).

## OBJECTIONS TO EVIDENCE-BASED PRACTICE

All innovations have advantages and disadvantages; evidence-informed practice is no exception. Many challenges confront helpers who want to make evidence-informed decisions such as gaining access to research findings related to important questions and critically appraising this knowledge in a timely manner. Straus and McAlister (2000) note that some limitations of EBP are universal in helping efforts such as lack of scientific evidence related to decisions and challenges in applying evidence to the care of individuals. Barriers they suggest include the need to develop new skills and limited funds and resources. Some objections result from misunderstandings of EBP. Others result from distortions of EBP (see Gibbs & Gambrill, 2002).

## CONTROVERSIES REGARDING EVIDENCE

The degree of rigor that should be used to evaluate claims of effectiveness and the extent to which clients should be involved as informed participants are key controversies reflected in material in which the title “evidence-based practice” appears as revealed for example by use of hierarchies of evidence of different degrees of rigor (Gambrill, 2006). Both the origins of EPB and objections to it reflect different views of “evidence.” Concerns about inflated claims of effectiveness based on biased research studies was a key reason for the origin of EBP and health care. Inflated claims obscure uncertainties that, if shared, may influence client decisions. When do we have enough to recommend a practice or policy? Do criteria for “having enough” differ in relation to different kinds of decisions? There are many kinds of evidence. Davies (2004) suggests that a broad view of evidence is needed to review policies including (a) experience and expertise, (b) judgment, (c) resources, (d) values, (e) habits and traditions, (f) lobbyists and pressure groups, and (g) pragmatics and contingencies. He argues that we should consider all of these factors in making decisions about whether or not to implement a policy. Davies identifies six kinds of research related to evidence of policy impact: (1) implementation, (2) descriptive analytical, (3) attitudinal, (4) statistical modeling, (5) economic/econometric, and (6) ethical.

### Different Criteria for Evaluating Practice and Policy Claims

Different opinions about how much “we know” reflects use of different criteria. The Clinical Psychology Taskforce (1995) of the American Psychological Association suggested that two well-designed RCTs showing positive outcomes represent an “empirically validated treatment.” A more measured statement would be to say that a claim has been critically tested in two high-quality randomized controlled trials (see Altman et al., 2001) and has passed both tests; this keeps uncertainty in view (Popper, 1994). Given the history of the helping professions (e.g., bogus claims of effectiveness and harming in the name of helping), isn’t the most ethical road to make measured rather than inflated claims so that professionals are not misled and, in turn, mislead clients?

Research suggests that professionals rely on weaker criteria when evaluating the evidentiary status of claims that affect their clients than they rely on when evaluating claims that affect their personal well-being (see Gambrill & Gibbs, 2002). Differences of opinion regarding what evidence is can be seen in the professional literature as well as in the media. Consider the book *What Works in Child Welfare* (Kluger et al., 2002). The editors say they originally had a question mark after the title but: “We decided to eliminate the question mark from the title because, despite its limitations, this book is a celebration of what works in child welfare” (p. xix). Leaving off the question mark is a red flag that the rigor of appraisal reflected in a book is quite different than that found in Cochrane and Campbell Collaboration reviews, for example. The authors do not clearly describe where they searched, how they searched, or what criteria were used to critically appraise different kinds of research reports. We are given no information at many points as to the length of follow-up. Contrast such a grandiose title with the statement on the back of the seventh edition of *Clinical Evidence* (2002) described earlier. Has social work outstripped the field of medicine and health care in what it knows about what works?

### *Systematic Compared to Unsystematic Reviews of Research*

A key way in which views of evidence-informed practice differ is in the degree of rigor in evaluating knowledge claims illustrated by the different conclusions concerning the effectiveness of multisystemic therapy (MST; Henggeler, Schoenwald, Borduin, & Swenson, 2006; Littell, 2005). MST is widely touted as effective (see, e.g., Lehman, Goldman, Dixon, & Churchill, 2004). Based on a critical appraisal of reviews of MST, Littell (2005) concluded that such programs have few if any significant effects on measured outcomes compared with usual services or alternative treatment. Littell followed the guidelines developed by the Campbell and Cochrane Collaborations in preparing her review. She found that few reviews reported information on attrition in primary studies, whether outcome measures were blind or included an intent-to-treat analysis. Concerns identified in the eight studies that met inclusion criteria and that were included in a subsequent analysis were inconsistent reports on the number of cases randomly assigned, unyoked designs, unstandardized observation periods within studies, unclear randomization procedures, and subjective definitions of treatment completion. Only one study met the criterion of a full intent-to-treat analysis with a well-defined follow-up (see also Littell, 2006; Littell, Popa, & Forsythe, 2005). This review, as well as many others, show that unsystematic reviews come to different conclusions than do systematic reviews; typically, the former conclude that an intervention was successful when systematic reviews conclude that there is no evidence for claims of effectiveness.

Another term used is *best evidence*. For example, if there are no randomized controlled trials regarding an effectiveness question, then we may consult a hierarchy of evidence in relation to the rigor of critical appraisal of a claim and move down the list. This indeed is what we must do in the everyday world since most interventions have not been critically tested. Thus, instead of well-designed randomized controlled trials regarding an intervention, we may have to rely on findings from a pre/post test. As this example illustrates, the term *best evidence* could refer to tests that differ greatly in their ability to critically test a claim.

## **OBSTACLES**

Obstacles lie at many different levels ranging from dysfunctional organizational cultures and climates in which errors are hidden and staff are punished for blowing the whistle on inadequate or harmful practices and policies to personal characteristics such as arrogance and flawed self-assessments (Dunning, Heath, & Suls, 2004) continue biases such as wishful thinking (Gambrill, 2005) and preferences for ideologies rather than evidentiary status (Gorman, 1998). Challenges include gaining timely access to external research findings related to important practice and policy questions and critically appraising this knowledge (see, e.g., Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Oxman & Flottorp, 1998). Inflated claims are more the rule than the exception in the helping professions, misleading clients and others. Money may not be available for computers allowing rapid access to needed databases or for knowledge resource personnel who can help staff locate valuable research related to information needs in a timely manner. The steps in EBP may sound as if they are easy to carry out but that is often not the case. Literature concerning

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EBP suggests that posing well-structured questions can be difficult. Thus, one obstacle is thinking it is easy and giving up when difficulty occurs. Special training, repeated guided practice, and related tools and resources are needed to carry out the steps of EBP in real time. Even then, many obstacles remain, such as authoritarian agency cultures. Skills are needed in evidence management, searching, appraisal, and storage (Gray, 2001a). And competence does not guarantee good performance; the distinction between performance and competence is an old and continuing concern. Developing technology to address application problems has been a key contribution of evidence-informed practice. This is an ongoing challenge. A review of 102 trials of interventions designed to help health professionals deliver services more effectively and efficiently shows that there are “no magic bullets” (Oxman, Thomson, Davis, & Haynes, 1995).

A lack of assessment knowledge and skills may contribute to posing misleading questions and overlooking important individual differences in a client’s circumstances or characteristics. For example, posing an effectiveness question before discovering factors that contribute to depression (such as “In adults who are depressed, is cognitive-behavioral therapy, compared to medication, most effective in decreasing depression?”) may overlook the fact that, for this client, recent losses in social support are uppermost, which suggests a different question, such as “In adults who are depressed because of a recent loss in social support, is a support group or individual counseling more effective in decreasing depression?” A reluctance to candidly acknowledge controversy, both conceptual and methodological, is a key obstacle that compromises fulfillment of ethical obligations to accurately inform clients and to draw on practice and policy related research. Consider critiques of practice guidelines (see Norcross, Beutler, & Levant, 2006). If it is true, as Wampold (2006) suggests, that the particular intervention contributes little to outcome, what are the implications for evidence-informed practice?

### CHOICES AHEAD

This overview of EBP suggest choices ahead including the view of EBP favored—a broad, systemic view or a narrow view such as use of practice guidelines (Gambrill, 2006). Choices include how transparent to be regarding controversies (both methodological and conceptual), whether to involve clients as informed participants, and whether to advocate for better services in the face of need. (See the introduction to this chapter.) Individuals in organizations such as clearinghouses for EBP will make decisions about how transparent to be regarding the evidentiary status of current and proposed practices and policies. Choices will also be made about who to involve in selecting key questions to focus on. Will it be clients and line staff on the front lines of care? Or will it be researchers and administrators who make such decisions for clients and line staff? Who will be trained in critical appraisal skills? Will the vision of EBP promoted forward client involvement as informed participants? Will social workers be “conscientious, judicious and explicit” (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996) regarding decisions that must be made? To what extent do the chapters in this volume reflect such characteristics? The key choice will be whether and to what extent to honor obligations described in our professional codes of ethics.

## CONCLUSION

EPB offers practitioners and administrators a philosophy that is compatible with obligations described in professional codes of ethics and educational accreditation policies and standards (e.g., for informed consent and to draw on practice and policy-related research findings) as well as an evolving technology for integrating evidentiary, ethical, and practical issues. Related literature highlights the interconnections among evidentiary, ethical, and application concerns in making decisions and suggests specific steps that can be taken (a technology) to decrease gaps among them in all professional venues including practice and policy (e.g., drawing on related research as required in professional codes of ethics), research (e.g., preparing systematic reviews and clearly describing limitations of studies), and professional education (e.g., exploring the value of problem-based learning in developing practitioners who are lifelong learners). Transparency and honesty regarding the evidentiary status of services is a hallmark of this philosophy. The uncertainty associated with decisions is highlighted not hidden. Evidence-informed decision making calls for honest brokering of knowledge and ignorance, for example, clear description of criteria used to make decisions. It encourages us to attend to ethical obligations (to draw on practice- and policy-related literature, to involve clients as informed participants, to focus on outcomes clients value), and to be systemic (e.g., address application obstacles such as agency cultures). Professional codes of ethics require characteristics of EBP such as drawing on practice- and policy-related research and involving clients as informed participants.

The idea of integrating practice and research in professional contexts is not new, nor is attention to ethical issues as they relate to evidentiary ones. What is new about EBP and care is the description of an evolving philosophy and process designed to interlink evidentiary, ethical, and evidentiary concerns in all professional venues (practice/policy, research, and professional education). Key steps in EBP include posing well-formed, questions regarding information needed to make important decisions, searching efficiently and effectively electronically for related research, critically appraising what is found (or drawing on high-quality critical reviews prepared by others), using practice expertise to integrate diverse sources of information including knowledge about the clients' values, expectations and preferences and available resources, and making a decision together with clients about what to do, trying it out, evaluating what happens, and learning from this experience how to do better next time. These steps increase the likelihood that all involved parties will be well informed about the uncertainties associated with decisions.

As with all innovations, objections will and should be raised. It is important to distinguish between objections based on incorrect views of EBP and those based on an accurate understanding. Otherwise, we may prematurely discard promising approaches and lose opportunities to address real challenges. Differences of opinion regarding how rigorous to be in reviewing practice- and policy-related research will continue. There are many challenges to evidence-informed practice, including those involved in learning new skills and acquiring access to needed resources, such as high-quality training programs and needed databases and arranging for ongoing feedback to keep skills well honed. Although the steps involved in evidence-informed practice may sound simple and straight forward, they are often difficult and sometimes impossible to carry out successfully in the real world. Access to a skilled informatist and to efficient search engines are vital. The more the guided practice and provision of needed tools, the more likely the steps can be carried out in a way

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that honors ethical obligations to make well-reasoned decisions and to accurately inform clients regarding the evidentiary status of recommended services. In the everyday world, “best practice” may have to be based on shaky evidentiary grounds. Evidence-informed practice and policy encourages professionals to be honest about these grounds so clients are involved as informed participants in decisions made. Perhaps the greatest challenge is a willingness to acknowledge gaps in our current knowledge regarding decisions that must be made and what may be “out there.” A willingness to say “I don’t know” and a commitment to clients to discover what is out there (including nothing) are vital. So, too, is a willingness and the courage to “stand up for others.”

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