

## Evidence-Based Practice (EBP) *Literature Review*

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### I. Origin and Definition of Evidence-Based Practice

We live in an age in which new research in medicine and the social sciences is reported almost daily, and the pace of change can be staggering. While some view this as the age of the educated consumer, the reality is that few individuals have the ability or the time to sift through the available data to make informed decisions.

Instead, many individuals expect healthcare professionals (including those in mental health) to have the knowledge base to determine which treatment methodologies will result in the most positive outcomes with the least cost in terms of suffering, time, and money. Because of the trust placed in them, healthcare professionals have a fiduciary duty (Roberts & Yeager, 2004) and moral responsibility (Hancock & Easen, 2004) to acquire the knowledge required to answer the question “What do you recommend?” based on the best available scientific information.

Bridging health and human services with scientific research inquiry, also known as *evidence-based practice*, emerged toward the end of the 20<sup>th</sup> century and proliferated worldwide in the early 21<sup>st</sup> century within major universities, family treatment centers, and medical and mental health centers across the world (Roberts & Yeager, 2004). Evidence-based practice has its roots in evidence-based medicine, which was coined in the 1980s as a term for the clinical learning strategy developed at McMaster Medical School in Canada (Cliff, Harte, Kirschling, & Owens, 2004;

#### *Defining Evidence-Based Practice* (Levine, 2004)

- An approach to practice that requires the examination of research findings from systematic clinical research (e.g., randomized controlled clinical research) in making decisions about the care of a specific population with a specific problem.
- The process of critically identifying and employing treatment or practice approaches that have the strongest basis of empirical support for attaining desired outcomes.
- Any practice that has been established as effective through scientific research according to a set of explicit criteria.
- A way of practicing in which the practitioner critically uses best evidence, expertise, and values to make practice decisions that matter to individual service recipients.



Cutspec, 2004a; Guyatt & Rennie, 2002 as cited in Singh & Oswald, 2004; Rosenberg & Donald, 1995; Rosenthal, 2004). In fact, the leading discipline in the application of evidence-based practice is medicine.

In medicine and other disciplines, the most frequently cited definition of evidence-based medicine is provided by Sackett and colleagues (i.e., Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996) who indicate that “evidence-based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients” (p.71). For Sackett and colleagues evidence-based medicine is the “integration of best research evidence with clinical expertise and patient values” (Sackett et al. 2000, p. 1, as cited in Shlonsky & Gibbs, 2004). As an extension of evidence-based medicine, Proctor and Rosen (2004) suggest that evidence-based practice is comprised of three assertions: (1) intervention decisions based on empirical, research-based support; (2) critical assessment of empirically supported interventions to determine their fit to and appropriateness for the practice situation at hand; and (3) regular monitoring and revision of the course of treatment based on outcome evaluation.

### ***Evidence-Based Decision Making At-A-Glance***

Generally, there are a series of steps to be taken in making practice decisions based on the best available evidence. The first step is to *evaluate the problem to be addressed and formulate answerable questions*. This step involves identifying and obtaining information about interventions that have been empirically tested and supported. The next step is to *gather and critically evaluate the evidence available*. In general, evidence is ranked hierarchically according to its scientific strength (see Table 1). Depending on the length of time and settings in which they have been used (including resources available to conduct evaluations), various interventions will have been evaluated more frequently and rigorously. Therefore, for newer interventions, only Level 4 evidence may be available (see Table 1). Roberts and Yeager (2004) suggest that in such cases, practitioners should use the intervention with caution, continue to search for evidence of its efficacy, and be prepared to evaluate the

#### ***Defining Efficacy (Levine, 2004)***

Efficacy refers to the potency of an intervention. The efficacy of an intervention is related to the extent to which changes in the individual are due to the active ingredients of the intervention. This is a type of impact study where the focus is on the estimate of maximum program impact, i.e., the difference between treatment and counterfactual conditions when treatment implementation proceeds as intended. Efficacy studies are often referred to as the upper bound estimates of treatment impact or impact that can be expected under ideal practice conditions.



intervention's efficacy in their own practice. The final steps involve applying the results of the assessment to practice or policy and then continuously monitoring the outcome.

**Table 1. Levels of Evidence**

Scientific Strength	Level	Description
	1 (Most rigor)	Meta-analysis <sup>i</sup> or replicated randomized controlled trials (RCT) <sup>ii</sup> that include a placebo condition/control trial or are from well-designed cohort <sup>iii</sup> or case control analytic study <sup>iv</sup> , preferably from more than one center or research group, or national consensus panel recommendations based on controlled, randomized studies, which are systematically reviewed.
	2	At least one RCT with placebo or active comparison condition, evidence obtained from multiple time series with or without intervention, or national consensus panel recommendations based on uncontrolled studies with positive outcomes or based on studies showing dramatic effects of interventions.
	3	Uncontrolled trial, observational study <sup>v</sup> with 10 or more subjects, or opinions of respected authorities, based on clinical experiences, descriptive studies, or reports of expert consensus <sup>vi</sup> .
	4 (Least rigor)	Anecdotal case reports, Unsystematic clinical observation, Descriptive reports, Case studies, and/or Single-subject designs <sup>vii</sup> .

*Note:* From *Evidence-Based Practice Manual: Research and Outcome Measures in the Health and Human Services* (p.6), by A.R. Roberts and K.R. Yeager, 2004, New York: Oxford University Press. Copyright 2004 by Oxford University Press, Inc. Used by permission of Oxford University Press.

In better understanding the definition of evidence-based practice, it is important to begin with a common understanding of its overlap and distinction from practice-based research. Evidence-based practice emphasizes the practitioner's use of scientifically validated assessment, intervention, and evaluation procedures; and the practitioner's use of critical thinking when making practice decisions that matter to service recipients. Practice-based research refers to scientifically investigating issues related to practice, which may or may not specifically address questions of practice effectiveness.



Roberts and Yeager (2004) indicate that while there are overlaps between practice-based research and evidence-based practice, generally speaking, practice-based research serves as the springboard for the development of evidence-based practice. Stated differently, practice-based research is the foundation for evidence-based care. Roberts and Yeager further provide two explanations forming the basis for differences present within the understanding and operational definitions of evidence-based practice: (1) there are differences both within and between disciplines when addressing various approaches to similar problems with evidence-based care; and (2) source data contributing to the evidence-based practice foundation does not currently lend itself to the infusion of new knowledge gained from practice settings. To better understand the second explanation, it is important to note that “source data” refers to three general sources, namely, systematic reviews<sup>viii</sup>, practice guidelines<sup>ix</sup>, and expert consensus guidelines. Applying information from these sources to practice is never easy, particularly because there has been more success in developing evidence-based practice information than in dissemination. Moreover, using evidence-based practice is challenging because the information that is available has variability in accuracy and utility and therefore, must be weighed by the practitioner to determine its application. On top of this challenge, is the fact that evidence for practice is growing so rapidly that keeping up with the literature is a formidable task even for the most committed and seasoned practitioner.

## II. Perspectives on Evidence-Based Practice

It is important to note that the concept of evidence-based practice is perhaps one of the most important ideas the social sciences have investigated in recent years. Even a cursory glance at the literature reveals a burgeoning interest in evidence-based practice. For example, a PsychINFO search indicates an astounding increase in the number of hits on the key term “evidence-based practice” between the mid-1980s and up until the writing of this review. Moreover, since the mid-1990s, the following journals have been founded with “evidence-based” in some form or function as their focus: *Evidence-Based Mental Health (EBMH)*, *Evidence-Based Nursing*, and *Evidence-Based Medicine*. Even a Google search on the keyword “evidence-based practice” yields 2,070,000 hits.



Education is also being affected by evidence-based practice. That is, at least one school of social work, namely, the George Warren Brown School of Social Work at Washington University, has identified evidence-based practice as the organizational framework for its graduate curriculum (Howard, McMillen, & Pollio, 2003 as cited in Jenson, 2005). At the University of Denver, in the Graduate School of Social Work, Jenson (2005) and others are exploring ways to disseminate and link evidence-based practice to state and local foundation and agencies.

With a plethora of information available, making sense of the evidence-based practice movement can seem overwhelming. It's no wonder that evidence-based practice is quickly becoming a buzzword and perhaps in danger of becoming a fad (Blome & Steib, 2004; Chaffin & Friedrich, 2004; Rycroft-Malone, Seers, Titchen, Harvey, Kitson, & McCormack, 2004). Critics point out that there is little relevant research available regarding most questions that a practitioner asks; and argue that much of the research that is available is of little use because so many scientific studies are conducted in contexts that have little resemblance to realistic practice situations.

However, in their highly influential book, *Evidence-Based Practice Manual: Research and Outcome Measures in the Health and Human Services*, Roberts and Yeager (2004) <sup>x</sup>attempt to consolidate state-of-the-art evidence-based knowledge so that graduate students and practitioners in the medical and human services professions have all of the latest research and evaluation guidelines, research exemplars, and evidence-based protocols in one volume. Their book is probably the most comprehensive treatment of evidence-based practice and the only interdisciplinary volume available for locating and applying evidence-based assessment measures, treatment plans, and interventions. The *Evidence-Based Practice Manual* emphasizes and summarizes key elements, issues, concepts, and how-to approaches in the development and application of evidence-based practice. The manual includes concise summaries of the substantive evidence gained from methodologically rigorous quantitative and qualitative research, making it an accessible resource for a broad range of practitioners facing the mandate of evidence-based practice in the health and human services.

Applying evidence-based practice approaches is currently considered the industry standard in many helping disciplines, from medicine to managed mental health care (Corcoran & Vandiver, 2004; Stoil, 2004).



It has also been suggested that evidence-based practices have emerged as “the solution du jour” for the U.S. Department of Health and Human Services (Stoil, 2004). Consequently, the very definition of evidence-based practice has become more illusive and perhaps ambiguous. There are numerous terms being used around the country to describe the delivery of health and human services from “emerging practice” to “promising practice,” “best practice,” “evidence informed practice,” “science based practice,” and “evidence-based practice.” While some restrict the term evidence-based practice to systematic reviews using meta-analytic procedures, others use a wider scope that may include less rigorous studies and influential case studies or expert consensus guidelines.

The point is that a number of these terms have very specific meaning to some professionals but others may use the same term in dramatically different ways, illustrating that there is no consensus on, or regulation of, what exactly constitutes an evidence-based practice because of variations in fidelity and implementation issues (Chaffin & Friedrich, 2004; Helfand, 2005; Jenson, 2005). A practice can have rigorous evidence to support it, a detailed manual, and perform well with a variety of clients in controlled research studies, but still not meet practical considerations that determine its applicability to the field. For example, if it is expensive to train staff, if the manuals are pricy or if insurance or other forms of payment do not cover the intervention, the practice may be deemed useless in the field. More importantly, as Jenson (2005) points out, untested interventions marketed as evidence based under such names as “best practices” or “exemplary programs” promotes a false sense of efficacy, erodes the basic principles of evidence-based practice, and dilutes commonly accepted definitions of evidence-based practice used in medicine and psychology.

Yet, it is important to note that in many areas of social science, practices cannot be simply divided into “evidence-based” and “non-evidence based.” Instead, efforts to classify evidence-based practice have assessed practices along a continuum from highly research supported practices on one end to very questionable and concerning practices that lack even a sound theoretical or common sense bias, or that may even be harmful, on the other end. For example, classification schemes have been developed by the American Public Human Services Association (2005), the National Crime Victims Research and Treatment Center, funded by the Office of Victims of Crime (OVC) (Saunders, Berliner, & Hanson, 2004), and the



Substance Abuse and Mental Health Services Administration (SAMHSA) (2006). In similar efforts, terms like “model program”, “well-established”, or “promising program” reflect the amount of evidence that supports the practice with the definitions and terminology differing from one set of criteria to the next. Across disciplines a number of different criteria sets for evidence-based practices have been developed to guide the review of programs, for example, criteria for empirically evaluating psychosocial treatments developed by the American Psychological Association Task Force on Promotion and Dissemination of Psychological Procedures (as cited in Lonigan, Elbert, & Johnson, 1998); and the standards of evidence developed by the Society for Prevention Research (2004).

Having a basic understanding of what is meant by evidence-based practice is helpful but it is also important to know what evidence-based practice does not mean. First, it does not necessarily mean that only practices meeting the highest possible criteria for scientific evidence should be used. Second, it does not imply that a complete body of rigorous research must exist for all potential outcomes or with all potential population subgroups before evidence-based practice can be realized. As Chaffin and Friedrich (2004) acknowledge, in child maltreatment for example, very few intervention models meet the high standards required to designate a model as “well-supported.” They point out that evidence-based practice simply means favoring the best supported available practices. That is, where well-supported or empirically validated practices are available, they may be synonymous with evidence-based practice. Where there are no fully supported interventions, Chaffin and Friedrich suggest that one must pick from among competing models with varying levels of support.

While the level of evidence is critical to identifying a practice as evidence-based, it might be helpful to consider a reframing of what could be meant by evidence. Rycroft-Malone, Seers, Titchen, Harvey, Kitson, and McCormack (2004) suggest that the delivery of effective, evidence-based patient-centered care will only be realized when a broader definition of what counts as evidence is embraced. They propose that ‘evidence’ in evidence-based practice should be considered to be ‘knowledge derived from a variety of sources that has been subjected to testing and has been found to be credible’ (Higgs & Jones, 2000, p.311 as cited in Rycroft-Malone et al., 2004). Essentially, they suggest that practitioners need to draw on and integrate multiple sources of propositional and non-propositional knowledge<sup>xi</sup> informed by a variety of



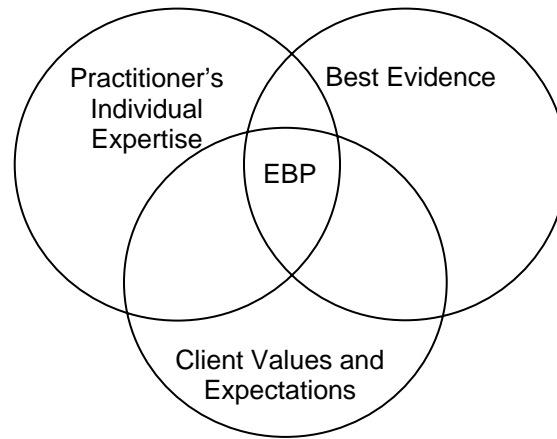
evidence bases that have been critically and publicly scrutinized. The evidence bases are named according to their source: research, clinical experience, patient experience, and information from the local context. Drawing on these four sources of evidence will require bridging two approaches to care: the scientific and the intuitive. Rycroft-Malone et al. (2004) recognize that the challenge is to ensure that each type of evidence is as robust as possible, while ensuring that individualized care is delivered.

Another approach toward reframing or operationally defining evidence-based practice has been proposed by Dunst, Trivette and Cutspec (2002). They suggest that evidence-based practices can be defined as “practices that are informed by research, in which the characteristics and consequences of environmental variables are empirically established and the relationship directly informs what a practitioner can do to produce a desired outcome” (p. 3). Dunst et al. (2002) point out that their operational definition has a two-pronged emphasis: on one hand it focuses attention on the empirical relationship between the characteristics and consequences of a practice or intervention, while on the other hand, it demands that the ways in which the relationships are established directly inform how a practitioner implements evidence-based practices. They explain that it is the latter that distinguishes their definition from most other approaches to establish evidence-based practices.

### **III. A Specific Methodology for Evidence-Based Practice**

In this section, a specific methodology that direct service practitioners can use to develop evidence-based practice options for a given child, parent, or family is presented. As a reminder, for Sackett and colleagues, evidence-based medicine is the “integration of best research evidence with clinical expertise and patient values” (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000, p. 1, as cited in Shlonsky & Gibbs, 2004). Shlonsky and Gibbs (2004) suggest that it is the intersection of current best evidence, client values and expectations, and practitioner expertise that defines evidence-based practice.





**Figure 1. EBP model illustrating that evidence-based practice is the intersection of current best evidence, client values and expectations, and practitioner expertise.**

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Note: From "Will the Real Evidence-Based Practice Please Stand Up? Teaching the Process of Evidence-Based Practice to the Helping Professions," by A. Shlonsky and L. Gibbs, 2004. *Brief Treatment and Crisis Intervention*, 4(2), p. 138. Copyright 2004 by Oxford University Press. Used by permission of Oxford University Press.

Further, Shlonsky and Gibbs (2004) suggest that this integration is perhaps best illustrated with a Venn diagram shown in Figure 1 (see also Sackett, Richardson, Rosenberg, & Haynes, 1997, as cited in Shlonsky & Gibbs, 2004).

Decision making is not dictated solely by current best evidence because none of the three core elements stand alone. Rather, the core elements work together by using practitioner skills to develop a client-sensitive case plan that uses interventions with a history of effectiveness. If there is an absence of relevant evidence, then the other two elements are weighted more heavily. However, in the presence of overwhelming evidence, the best evidence element might be weighted more heavily.

**Pitfalls to Avoid in Posing Questions & Searching Literature (Shlonsky & Gibbs, 2004)**

- Asking questions that are irrelevant to the client in terms of outcomes sought or resources available (e.g., asking about an intervention that the client would refuse)
- Asking questions that are vague in terms of the concept being searched, intervention(s) applied, or outcome(s)
- Asking incomplete questions (e.g., asking effectiveness or prevention questions that do not include an alternate intervention)
- Incorrectly labeling a problem, procedure, or outcome (i.e., avoid lay terminology or jargon as these are often absent in databases)
- Asking two or more questions within one question
- Querying only one database before deciding that enough information has been obtained



Evidence-based decision making in medicine is done by asking questions, finding, and appraising relevant data, and using that information in the form of reliable estimates of benefit and harm (Rosenberg & Donald, 1995). This approach requires integrating individual clinical expertise with the best available clinical evidence from systematic research. Thus, evidence-based medicine is the process of systematically finding, appraising, and using current research findings as the basis for clinical decisions.

As applied to the helping professions, this process is generally described as having five well-defined steps that all practitioners can follow, if they have access to electronic databases.<sup>xii</sup> Sackett et al. (2000, p. 3-4, as cited in Shlonsky & Gibbs, 2004) propose the following steps:

**Step 1:** Converting the need for information (about prevention, diagnosis, prognosis, therapy, causation, etc.) into an answerable question.

**Step 2:** Tracking down the best evidence with which to answer the question.

**Step 3:** Critically appraising that evidence for its validity (closeness to the truth), impact (size of the effect), and applicability (usefulness in clinical practice).

**Step 4:** Integrating the critical appraisal with clinical expertise and with the patient's unique biology, values, and circumstances.

**Step 5:** Evaluating effectiveness and efficiency in executing Steps 1 through 4 and seeking ways to improve them both for the next time.

The evidence-based practice approach is a bottom-up method that outlines how an individual practitioner can incorporate research into daily decision making. It empowers individual practitioners and clients to actively collaborate in making decisions about treatment. Ultimately, evidence-based practice is about cultural change within an agency. That is, the approach extends to administrators in human service agencies who should create a culture of inquiry where practitioners are given time and resources to search for relevant information.

### ***Essential Skills & Ingredients for Evidence-Based Practice***

One essential skill for evidence-based practice is the ability to think critically. Critical thinking is the disciplined ability and desire to assess evidence. It is an active effort to seek a breadth of contradicting as well as confirming information, to make objective judgments on the basis of well-supported reasons as a



guide to belief and action, and to monitor one's thinking while doing so (metacognition). The thought processes necessary and appropriate for critical thinking depend on the knowledge domain (e.g., scientific, mathematical, historical, anthropological, economic, philosophical, moral). Critical thinking demonstrates universal criteria: clarity, accuracy, precision, consistency, relevance, sound empirical evidence, good reasons, depth, breadth, and fairness (Levine, 2004).

Rapid critical appraisal of RCTs is another essential skill for evidence-based practice.<sup>xiii</sup> Mazurek Melnyk and Fineout-Overholt (2005) developed a checklist for the rapid appraisal of an RCT that appears to be very helpful. Once a critical appraisal has been conducted and it is determined that a practice is backed by rigorous evidence, then the practice must be weighed against criteria regarding its theoretical soundness, clinical support, acceptance within the field, potential for harm, documentation, and empirical support. However, in the absence of rigorous evidence, practical considerations (i.e., practitioner's individual expertise and/or client values and expectations) may be weighted more heavily. However, in the presence of overwhelming evidence, it is the best evidence that is weighted more heavily. Generally, evidence is ranked hierarchically according to its scientific strength and there are various hierarchies of evidence to choose from (e.g., see Geddes, 1999 and Roberts & Yeager, 2004).

Information literacy is another essential ingredient to evidence-based practice (Skiba, 2005). Therefore, it is important to assess practitioners' information literacy knowledge and competency and their access to research information. The American Library Association (ALA) first introduced the concept of information literacy in 1989 (as cited in Skiba, 2005). Their definition states: "To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association, 1989, p.1 as cited in Skiba, 2005). Following the ALA report, many disciplines embraced the concept and incorporated it into their curricula.

Here are some questions that program administrators and Chapter executive directors could ask their staff to ensure that practitioners in their organization have the necessary information literacy skills for evidence-based practice:



- *What is your level of knowledge and skills in information literacy?*
- *What resources are available to help practitioners develop, maintain and expand their knowledge and skills? Are there resources at the public library or on the Web that might prove beneficial?*
- *Does your organization provide an information literacy course?*
- *How is information literacy assessed?*

The aforementioned questions can be used to determine if information literacy is low and to inform steps to address improvements.

#### **IV. Development and Implementation of Evidence-Based Practice**

The Institute of Medicine (2001, as cited in Chaffin & Friedrich, 2004) estimates that it may require around 17 years for a new technology to make its way into widespread clinical use in medicine. This estimation suggests that the implementation of evidence-based practice is a complex undertaking. With regard to the uptake of evidence-based practice in child maltreatment service settings, the Kauffman Best Practices Project (2004) identified barriers at various levels including policy, community, organization, and individual factors. Among other things, structural problems with funding, lack of advocacy, lack of incentives that link rewards to client outcomes, lack of marketing of evidence-based practices, and the absence of a tradition of agencies as “learning organizations” that value rigorous outcome evaluation were identified as barriers to the uptake of evidence-based practice in child abuse agencies. The implication for moving child abuse prevention services toward evidence-based practice is that it will require a combination of organizational leadership, policy changes, and marketing. Chaffin and Friedrich (2004) suggest that the path toward evolutionary progress and refined interventions may lie in researcher-practitioner collaborative partnerships “to innovate and refine models, systematically test the results, then feed this information back into the service system (p. 1111).”

In the development and implementation of evidence-based practice, Blome and Steib (2004) point to the lessons that could be learned from other fields, such as medicine and organizational management, which have already learned that dissemination of information about research is necessary, but not sufficient to change practice. Like Chaffin and Friedrich (2004) who suggest that research become more like practice



and practice become more like research, Blome and Steib suggest that evidence-based change requires both an understanding of the questions research answers as well as those as it raises, and that it requires assessing needs, targeting change, and tracking and measuring both process and outcomes.

Kitson, Harvey, and McCormack (1998) suggest that successful implementation of research into practice is a function of the interplay of three core elements: (1) the level and nature of the evidence; (2) the context or environment in which the research is to be placed; and (3) the method or way in which the process is facilitated. Further, they propose that because current research is inconclusive as to which of these elements is most important in successful implementation, they all should have equal standing. This proposition is contrary to the often implicit assumption currently held where the level of evidence seems to be the most important factor for consideration. The authors offer a conceptual framework that considers this imbalance, showing how it might work in clarifying some theoretical positions and as a checklist for healthcare staff to assess what they need to do successfully to implement research into practice. Initial tests of the framework showed limited construct and face validity.<sup>xiv</sup> However, based on later refinements to the framework, anecdotal reports suggest that the framework has a good level of validity (Rycroft-Malone, Kitson, Harvey, McCormack, Seers, Titchen, & Estabrooks, 2002). The authors plan to develop it into a practical tool to aid those involved in planning, implementing, and evaluating the impact of changes in healthcare.

For the successful uptake of research into practice it seems that individual approaches to implementing evidence-based practice, such as developing critical thinking skills among practitioners to appraise research evidence, will be ineffective by themselves (Rycroft-Malone, Harvey, Seers, Kitson, McCormack, & Titchen, 2004), especially considering barriers to research utilization<sup>xv</sup> that challenge practitioners (e.g., insufficient time to implement new ideas, inadequate resources for implementation, not knowing what research is available or not having time to read research, etc.). Therefore, in addition to developing the skills of practitioners, evidence-based practice must be prioritized within an organization's agenda and aligned with resources that are appropriately allocated, targeted, and managed. Moreover, managerial support, facilitation, and a culture that is receptive to change are essential (Gerrish & Clayton,



2004; see also Cutspec, 2004a for a good overview of barriers to moving research to practice; and Cutspec, 2004b for more information on bridging the gap between research and practice).

### ***Dissemination of Evidence-Based Practice***

A major provision of evidence-based practice requires that efficacious interventions be available to the broader practice community (Jenson, 2005). Three methods that are used to relay information about efficacious interventions to practitioners include: (1) systematic reviews organized that detail the effects of interventions on specified outcomes; (2) published “lists” of effective programs by federal agencies and research centers; and (3) practice guidelines that offer treatment protocols based on empirical evidence. Leadership for the dissemination of systematic reviews has come from international interdisciplinary teams organized under the Campbell Collaboration (<http://www.campbellcollaboration.org>) and the Cochrane Collaboration (<http://www.cochrane.org>). These groups disseminate the results of systematic reviews to inform practitioners about the effects of interventions in health, behavioral, educational, and social settings.

Another dissemination approach has been organized by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Center for the Study and Prevention of Violence (CSPV) at the University of Colorado (as cited in Jenson, 2005). SAMHSA publishes a list of efficacious substance abuse prevention and treatment programs in the *National Registry of Evidence-Based Programs and Practices* (<http://www.modelprograms.samhsa.gov>). CSPV identifies effective violence prevention programs as part of its *Blueprints for Violence Prevention* dissemination efforts (<http://www.colorado.edu.cspv.html>). Another government agency taking up the clarion call for promoting evidence-based practice is the Agency for Healthcare, Research, and Quality, which has as its mission “to improve the quality, safety, efficiency, and effectiveness of health care for all Americans” (as cited in Barlow, 2005). Still another source for evidence-based practice is the use of practice guidelines, which are a set of systematically compiled and organized knowledge statements designed to enable practitioners to find, select, and use interventions that are most effective and appropriate for a given client, situation, and desired outcome (Corcoran & Vandiver, 2004).



## V. Conclusions

Among opinions and principles being held as true, evidence-based practice has consistently been characterized as the most challenging and critical practice area of health care and human services; never complete, as there is always room for updating and expansion; and a life-long learning process. It's also been described as the relationship between research and practice, a two-way street where one can move from research findings to practice contexts or, begin with realistic practice problems as the stimulus for research. For the most part, there is support for the notion that evidence-based practice holds great promise for building stronger bridges between science and practice. Fundamentally, the principles of efficacy and effectiveness expressed in evidence-based practice is raising awareness about the importance of considering empirical evidence in selecting interventions among practitioners who may not have considered such evidence in the past (Jenson, 2005).

Given that the definition of "evidence" can be relative, there remains concern that identifying practices as "evidence-based" will prove to be more complicated than expected. For example, as Stoil (2004) points out, there is lack of hard evidence for the rationale propounded for evidence-based practice by the government. For SAMHSA in particular, the concern is that evidence-based practices not be oversold as "The Solution" to both the cost and quality problems of publicly financed behavioral healthcare. For example, Stoil brings to bear that while many see value in evidence-based practices (regardless of how they are defined) as a step toward solidifying treatment effectiveness, they wouldn't want the movement to go into mental healthcare policy history as just another fad that promised more than it delivered. He concludes that sufficient evidence for government validated evidence-based practices just isn't in yet.

What is particularly important to note about evidence-based practice is that it is a process, not a top-down cookbook set of guidelines and standards, and not something that can be mastered quickly without learning new skills and new technology. Evidence-based practice is indeed a lifelong process that is built on a predisposition to critical thinking. In addition to developing the skills of practitioners, it is also important to empower consumers to make informed choices. To this end, the ability to understand and interpret evidence needs to be as much a life-skill for the public as well as for the healthcare and human services professions, respectively (Summerskill, 2005).



Still, the reality is that many organizations struggle to find a structure to effectively operationalize evidence-based practice into their efforts to provide the “best services or care.” In the end, the implication for moving child abuse and neglect prevention services toward evidence-based practice is that it will require a combination of many factors including, but not limited to, a strong organizational leadership that adopts a “learning organization” orientation (i.e., it values rigorous outcome evaluation, improves services based on outcomes research, and continuously monitors emerging research for best practices); increased advocacy and social demand for the dissemination of best practices to grant-making organizations, governing boards, parents, and professional organizations; the development of well-designed and well-marketed tool kits for evidence-based practices; and a change in the relationship between research and practice to the extent that there is an increased number of research-practice collaborations aimed at continuously refining and testing models for dissemination into practice.

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<sup>i</sup> Meta-Analysis: A study of studies, or collection and integration of experimental studies on a particular treatment or program where a statistical formula is used to measure the effect, size, and impact of the different treatment programs. It is also known as a systematic literature review that uses quantitative methods to summarize the findings (Levine, 2004).

<sup>ii</sup> Randomized Control Trials (RCT): A type of research design, also called experimental design, in which participants (subjects) are randomly assigned to a control (no treatment or treatment as usual) condition or to an experimental condition. The purpose of an



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RCT is to minimize biases, which may compromise, confound, or obscure the results of research contrasting the treatment with the control condition. The purpose of random assignment is to test the counter-factual i.e., to determine an answer to the question of what would the outcome be for the treatment group if they had not participated in the treatment? (Levine, 2004)

<sup>iii</sup> Cohort Study: Involves identification and selection of two groups (cohorts) of patients, one group that did receive the exposure/treatment of interest and one group that did not, and then monitoring and evaluating these cohorts prospectively for the outcome of interest. Stated differently, it is a research design in which people who were exposed to a supposed causal agent are compared to those not exposed, to determine if they differ with respect to the risk of some outcome) e.g., the groups could be smokers and nonsmokers with the outcome being lung cancer) (Levine 2004).

<sup>iv</sup> Case-Control Study: Similar to cohort study, this is a research design in which people with a specific outcome (e.g., a disease or syndrome) are matched with people who do not have the outcome. This is usually done to determine if the groups differ with respect to the risk of exposure to a supposed causal agent (e.g., the groups could be those with and without lung cancer, with the exposure being cigarette smoking) (Levine, 2004).

<sup>v</sup> Observational Study: One in which the researcher looks at the relationship among variables but does not alter the variables in any way (Levine 2004).

<sup>vi</sup> Expert Consensus is the synthesis of the evidence of treatment effectiveness using a panel of noted contributors of the field. The outcome of an expert consensus is often a treatment protocol or guideline (Levine, 2004).

<sup>vii</sup> Single-Subject Design: The structure for studying a single unit such as one person, one family, or one organization over time. Such designs typically require the researcher to clearly identify specific interventions to be studied, operational specification of measurable outcomes or dependent variables, and establishment of a baseline rate followed by measurement of rates following the intervention (Levine, 2004).

<sup>viii</sup> Systematic review is the process of searching for, recording, analyzing, and interpreting the evidence from all valid research studies addressed to a specific question, using explicit criteria and methods. Sometimes systematic reviews use a quantitative method, namely, meta-analysis, to analyze the data provided by the studies reviewed. The summary report of this process is called a systematic review (Levine 2004).

<sup>ix</sup> Practice guidelines are a set of systematically compiled and organized knowledge statements designed to enable practitioners to find, select, and use interventions that are most effective and appropriate for a given client, situation, and desired outcome (Levine, 2004).

<sup>x</sup> Roberts, A. R., & Yeager, K.R. (Eds.). (2004). Evidence-based practice manual: Research and outcome measures in health and human services. New York: Oxford University Press.

<sup>xi</sup> Propositional knowledge (also known as declarative knowledge) is knowledge that some proposition is either true or false. This distinguishes it from know-how or procedural knowledge (i.e., non-propositional knowledge), which is the knowledge of how to perform some task.

<sup>xii</sup> See Shlonsky & Gibbs, 2004 for examples of applying the EBP process.

<sup>xiii</sup> There are a number of critical appraisal tools that have been published and are available for public use. For example, there is the CARE i.e., Checklist for Assessing the Research Evidence, see Swenson, C. C., & Chaffin, M. (2004). *Does treatment work? Checklist for assessing the research evidence (CARE)*, Tool presented during a workshop delivered for the annual colloquium of the American Professional Society on the Abuse of Children, Hollywood, California. There is also a checklist developed by the Coalition for Evidence-Based Policy, a project sponsored by The Council for Excellence in Government (December 2003), accessible at: [http://www.excelgov.org/usermedia/images/uploads/PDFs/User-Friendly\\_Guide\\_12.2.03.pdf](http://www.excelgov.org/usermedia/images/uploads/PDFs/User-Friendly_Guide_12.2.03.pdf)

<sup>xiv</sup> Validity refers to the extent to which the framework accurately measures the factors influencing the implementation of evidence into practice.

<sup>xv</sup> Research utilization is the process by which scientific knowledge is transferred to practice. It typically refers to the review and critique of scientific research, and then the application of the findings to practice. What is particularly important is to not confuse evidence-based practice with research utilization. Unlike research utilization, evidence-based practice goes beyond just the rigorous scientific research steps. That is, evidence-based practice represents a broader concept, in that it involves practitioners going beyond the expertise gleaned from research and practice, to considering the client or caregiver/family preferences and values to guide services.

