Evidence-based Practice vs. Evidence-informed Practice:

What's the Difference?

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Most people agree that scientific evidence should be used to influence practice and that it will help clinicians provide "best" care for clients and families. For many years the term *evidence-based* has been used freely by health-care professionals and more recently the term *evidence-informed* is used instead or as well. What do these terms really mean?

Evidence-based medicine was defined by Sackett et al. as the following:

> "Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. By individual clinical expertise we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice."[1]

Although the evidence-based process was defined for physicians, it has been adopted by many professionals who refer to it as evidence-based practice (EBP). Over the years, critics of EBP have argued that it will turn clinicians into technicians who follow a recipe and that there is a tendency to forget the client's or patient's values and circumstances with this approach. The EBP approach has become more overtly endorsing of clinical expertise and inclu-

Qualitative studies and mixed methods studies that pose questions from the client's perspective are vitally important for informing practice, as they present information about patients' perceptions and understanding that cannot be obtained in quantitative studies.

sive of client values, preferences, and circumstances.

This updated explanation stresses the importance of patient factors, indicating that EBM requires:

> ". . . the integration of the best research evidence with our clinical expertise and our patient's unique values and circumstances."[2]

The meaning of *best research evidence*, *clinical expertise*, *patient values*, and *patient circumstances* are more clearly and specifically indicated.

What Is EBP?

The evidence-based process consists of[2]:

- Asking a well-developed answerable question
- Searching for evidence
- Evaluating/appraising the evidence for validity (truth), size of effect , and applicability in clinical practice
- Integrating the critical evaluation with clinical expertise, and the patient's unique circumstances and values
- Evaluating the effectiveness for next time

What kind of evidence is needed to answer clinical questions?

As indicated by the World Health Organization (WHO), "not all evidence is equally convincing. How convincing evidence is depends on what sorts of observations were made and how well they were made. Research evidence is generally more convincing than haphazard observations because it uses systematic methods to collect and analyse observations."[3]

Evidence comes from research studies that have investigated specific clinical circumstances. Often clinicians are interested in knowing if an intervention works or works better than another intervention. This is only one type of question that clinicians might ask. Clinicians ask many different types of questions, such as:

- How prevalent is a particular condition or complication?
- What is the most appropriate means of assessment or risk assessment?
- Which treatment is the most clinically effective? Cost effective?
- Which preventive strategy is the most likely to be followed?
- What are the patient's experiences or preferences?
- Which measure of outcome is the most appropriate?

Different types of clinical questions are answered best by different types of research studies. Some examples of the best research design to address different types of clinical questions are illustrated in Table 1.

Since clinicians often want to know which therapy works best, this is the question topic that we will illustrate. The words "therapy" and "intervention" mean the same thing and will be used interchangeably.

To help in searching for evidence to answer a clinical question, the question needs to be specific and frequently includes PICO and sometimes T elements.[2,4]

P Population or problem
I The intervention
C The comparison (if appropriate)
O The outcome(s) of interest
T Time

Example: For persons over age 65 with type 2 diabetes who are in assisted living, does implementation of a daily walking program compared with no walking program have an effect on weight and glycemic control over six months?

Table 1. Clinical question topics are addressed best by different types of research studies

Question topics	Research study type
Treatment, therapy, intervention	Systematic review, Randomised controlled trial (RCT)
Patient experiences/concerns	Qualitative study
Prevalence of condition or complication	Cross-sectional study
Cost effectiveness	Economic study
Disease course	Longitudinal study

Table 2. Places to find pre-appraised evidence

Type of evidence	Appraising group	Website
Systematic reviews	Cochrane Collaboration	www.cochrane.org
Canadian Clinical Practice Guidelines	Canadian Diabetes Association	guidelines.diabetes.ca
Canadian Best Practice Guidelines	Registered Nurses' Association of Ontario	rnao.ca/bpg
U.S. Guidelines	National Guideline Clearinghouse Agency for Healthcare Research and Quality, U.S.	www.guideline.gov
UK Guidelines	National Institute for Health and Care Excellence	http://guidance.nice.org.uk/CG/Published

Where can clinicians look for evidence to support clinical practice?

Although individual research studies can be sought and appraised, most clinicians either do not have the time or do not have the expertise to find and appraise research studies. Therefore, a good choice for clinicians is to locate synthesized clinical information (individual studies that have been appraised and combined following a rigorous process) such as best practice guidelines or systematic reviews. These are considered a higher level of evidence in the hierarchy of evidence addressing interventions. The hierarchy of evidence is also referred to as levels of evidence.

The Canadian Diabetes Association and the Registered Nurses' Association of Ontario have developed many excellent guidelines for diabetes, wound prevention, assessment and management. Table 2 presents a few examples of sites where synthesized (pre-appraised) information can be found.

If pre-appraised, synthesized evidence is not available, individual studies can be found by searching databases such as Medline, CINAHL and Embase. It is a good idea to seek the assistance of a health-care librarian whenever possible to help locate appropriate articles. After selecting articles, critical appraisal of the evidence is done to determine if the study is valid and relevant/important. Critical appraisal that is beyond the scope of this paper has been presented previously.[5]

Evidence-based practice (EBP) or evidence-informed practice (EIP) is a process for making informed clinical decisions. Research evidence is integrated with clinical experience, patient values, preferences and circumstances.

Applying evidence to practice

Good quality evidence can inform practice if the studied population is similar to yours and if the intervention corresponds with your patient's values, preferences, circumstances, and available resources.

What is evidence-informed practice?

The EBP process described above relies on quantitative research studies that provide the highest levels of evidence for decisions about interventions and other practice topics such as assessment (diagnosis) and prevalence. Some people have argued that the evidence-based approach is too restrictive and that decision-making (for individual patients, for an organization, for a population) must rely on additional forms of evidence that are more inclusive.

Critics of EBP have suggested that information used to make clinical decisions in clinical practice should include more than evidence collected with the singular goal of reducing bias in intervention research, and should include a variety of sources of research infor-

mation that address a wider range of goals.[6] Estabrooks has suggested that clinicians add "some of our own conventional wisdom and common sense" in the form of knowledge gained from qualitative studies.[7] As well, other sources include case reports, scientific principles, and expert opinion.[4]

Although the term evidence-informed is used frequently of late rather than evidence-based, few authors have clarified the distinction. Miles and Loughlin promoted using the term 'evidence-informed' practice to indicate that the process be person-centred rather than focused on the science of reducing the quantitative evidence, which, they claim, has taken humanity out of clinical practice.[8]

Sometimes people talk about using evidence-based methods to systematically search, select, appraise, and summarize evidence, and then use that information in conjunction with clinical knowledge/expertise and knowledge related to the patient or population to make evidence-informed decisions for an individual, group, setting, or policy. Important international and national health organizations promote the idea of evidence-informed decisions, e.g., the WHO refers to evidence-informed policy making[3], and the Canadian Institutes of Health Research refers to evidence-informed decision making.[9]

Some people use the terms evidence-based and evidence-informed interchangeably without thinking much about what they mean. However, evidence-informed is used often these days and is the "catch-phrase" of choice as it appears to provide more flexibility regarding the nature of the evidence and its use, i.e., it implies that many different levels of evidence and types of evidence (described above) are needed and used to support decisions in clinical practice. Many people believe that "Evidence-informed practice extends beyond the early definitions of evidenced-based practice."[4]

Evidence-based practice (EBP) or evidence-informed practice (EIP)? The terminology is less important than the approach. At the level of individual patients/clients, it is important that clinicians know the unique values, preferences and circumstances of their clients in addition to the scientific evidence that supports and informs their practice.

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