Evidence–based practice has been the focus of much interest over the past decade in the health sciences field. Initially, this practice was developed in the medical field but it quickly expanded to other health care professions and to education.

Evidence based practice is an approach that makes it possible to make a clinical decision by combining the best scientific evidence with clinical experience and in consultation with the patient in order to choose the option that works best for the patient (Sackett et al., 2000).

Each patient is a unique case and therefore research findings must be applied in such a way as to adapt to the patient’s specific needs. The client’s culture, beliefs, values, expectations and past experiences are all elements that must be taken into consideration.

As for the professional’s experience, it is especially useful in the absence of scientific data to support certain clinical decisions. Tonelli (2006) states that clinicians must rely on their experience to make the best clinical decision for the patient and to do so while maintaining a balance between interventions that have proven effective and those that have not.

Scientific evidence comes from a variety of sources that help professionals in their clinical decision making process. In this way, the clinical decision is based on several sources of information that must also take into account the clinical context and the patient.

It is considered essential for clinicians and supervisors to develop an understanding of the basic concepts associated with best practice, such as critical analysis of articles and the transfer of research findings to current practice. We therefore definitely have to guide students through this process but we also allow them to acquire the tools needed to constantly improve the services offered.

Most authors agree that there are five key competencies (or steps) that need to be developed to integrate evidence into clinical practice:

- Formulating a clinical question
- Finding the best scientific evidence
- Critically analysing the scientific evidence
- Applying the scientific evidence to practice
- Evaluating the process of the four previous steps.
We are only going to look here at the components of the second step in evidence based practice, that is, finding the best scientific evidence.

No professional can claim to know everything . . . and that is even more so with students. This is why it is important to guide students as they seek answers to their initial question.

There are many information sources including books, professional journals, the Internet and electronic scientific databases.

The supervisor’s job is to encourage the student to use the electronic databases that contain the most credible and updated information and where he will be able to find an article dealing with his initial clinical question.

The table that goes along with this unit suggests links that can be used to access the databases of your choice.

In those databases, you will find articles that address certain types of studies. This unit describes six quantitative studies as a way to familiarize you with the terminology of each one. Note that they are organized in a hierarchy and that the meta analysis is at the top of the pyramid because it is a study with a high degree of methodological rigour.

**The meta analysis** brings together data from comparable studies and analyses them again using appropriate statistical tools. A meta analysis collects studies that attempt to answer the same specific question and in that sense, is similar to a systematic review (Université de Liège). This type of study is used to reach a global conclusion on a given subject. It is widely used in medicine to try to draw conclusions on studies with contradictory findings.

**The systematic review** is a rigorous critique of all randomized control trials related to a given topic. According to the Réseau francophone Cochrane, the first step is to search all studies, clinical trials or other appropriate studies, published or unpublished, that address the same specific clinical question; for example, all clinical trials conducted to evaluate the effectiveness of a treatment. The next step is to evaluate the quality of each study and synthesize the findings of the studies selected.
A randomized control trial is one in which the patients selected for a therapeutic intervention are randomly divided into two groups: the first group receives the treatment (treatment group), while the second group normally receives a placebo (control group). This type of study provides a means of knowing the effect of an intervention on a large group of human subjects. The subjects are divided into two groups on a random basis so that they will contain subjects who are relatively similar in all aspects (age, ethnicity, etc.) (Université de Liège).

A cohort study is a study in which the subjects are selected based on their exposure to the risk factors for an illness or as a result of receiving a treatment. The subjects are followed over a long period of time and compared to a group not exposed to the factor.

A case control study is one which the subjects are selected based on the outcome. It is a retrospective study in which the characteristics of the illnesses (the cases) are compared to those of subjects who are free of the illness (the controls) (U. de Liège).

A cross-sectional study provides a description of an illness’ frequency, its risk factors or its other characteristics in a given population over a specific period of time. It compares the data gathered at the end of the study to that from the beginning: the study of an association (and not a causal relationship) between a given intervention and a clinical outcome.

The following sites offer information on how to incorporate the five steps of evidence based practice in your clinical decisions and suggests such useful tools as a document entitled, “Les demarches effectuées PAS à PAS dans les bases de données” [Step by step approach to databases], as well as templates to use to critically analyse scientific articles: www.practiceeducation.ca and www.preceptor.ca.