

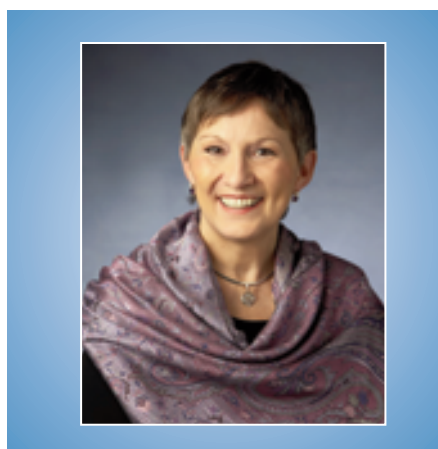
Evidence: Critical to Practice and Education

Karen H. Morin, RN, DSN, ANEF

The focus on evidence-based practice (EBP) has increased exponentially over the past 20 years. For example, a recent search using the keywords "evidence-based practice" yielded 9,616 hits from the MEDLINE (PubMed) database and 4,433 hits from the Cumulative Index of Nursing and Allied Health Literature (CINAHL). When "nursing" was included as a keyword, the search yielded 5,267 hits in PubMed and 172 in CINAHL.

This topic is the focus of several recent articles published in both the *American Journal of Nursing* and *Nursing Research*. The January/February 2010 issue of *Nursing Research* includes a supplement describing how military and Department of Defense nurses have incorporated evidence-based practice into their organization. Clearly, the nursing profession has enthusiastically embraced the concept of using evidence to guide practice.

How is evidence-based practice defined? Given such overwhelming support for the use of evidence in practice, understanding what constitutes evidence-based practice is critical. Irrespective of reference employed, key elements include addressing a clinical problem or question by examining the "best available scientific evidence" (Newhouse, Dearholt, Poe, Pugh, & White, 2007, p. 3) and then integrating that evidence with patient preferences and practitioner expertise (Craig & Smyth, 2002; Melnyk & Fineout-Overholt, 2005; Melnyk, Fineout-Overholt, Stillwell, & Williamson, 2009, 2010; Sackett, Strauss, Richardson, Rosenberg, & Haynes, 2000). In essence, EBP is a "problem-solving approach to the delivery of health care



that integrates the best evidence from well-designed studies and patient data, and combines it with patient preference and values and nurse expertise" (Melnyk et al., 2010, p. 51).

Moreover, EBP is not the same as research utilization (RU), a term employed in the 1970s and 1980s. Newhouse and colleagues (2007) highlight two major differences: RU relies on available and published evidence produced by the conduct of research while EBP takes advantage of organizational data and data that have not yet been published. EBP evidence includes credible information produced by quality improvement projects and experts. As Fitzpatrick (2010) states, "Evidence-based practice thus demands attention to the broad evidence, to what we know as expert clinicians, and to what we know as scientists" (p. 1).

Why the focus on EBP? The proliferation of information, the focus on outcomes and quality improvement, and societal pressure to receive the best care grounded on reliable current

information underpin current efforts in the profession to enhance practice based on evidence. A major impetus to the evidence-based practice movement has been the Institute of Medicine's (IOM) recommendation to base health care practices on evidence in an effort to close the health care quality chasm (IOM, 2003). The IOM goal is that by the end of 2010, "90% of health care decisions in the U.S. will be evidence-based" (Melnyk et al., 2009, p. 50). Yet, when investigators assessed nurse readiness for evidence-based practice, findings indicated that two-thirds (67%) always or frequently sought information from a colleague or peer, 72% had not evaluated reports of research, and 82% had never used a hospital library (Pravikoff, Tanner, & Pierce, 2005). A more recent study of nurses in New Jersey, a state with the highest concentration of Magnet-designated hospitals, revealed that when their results were compared to those of Pravikoff and colleagues, slightly fewer nurses (62%) always or frequently sought information from a colleague or peer, while the percent of nurses not evaluating research reports was significantly less (54%) (Cadmus et al., 2008). Moreover, findings indicated that NJ nurses valued EBP and recognized its importance in the delivery of care. Thus, there is still work to be done to assist nurses with the incorporation of evidence into their practice.

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What is available to help nurses incorporate evidence into their practice?

Some professional associations, such as Sigma Theta Tau International, have developed position statements (see list of resources on p. 3) and publish a journal dedicated to evidence-based practice (*Worldviews on Evidence-based Nursing, Linking Evidence to Action*) while others, such as the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) and the Registered Nurses Association of Ontario (RNAO) have initiated concerted research-based practice programs to assist nurses with the implementation of practice based on evidence.

While numerous approaches have been developed to help nurses implement EBP, only two are discussed here. Melnyk and colleagues (2009) indicated that a key element to infusing evidence into practice is to create an environment that encourages a spirit of inquiry, defined as "an ongoing curiosity about the best evidence to guide clinical decision making" (p. 49). In order for nurses who are committed to providing the best evidence-based care to act, organizations need to provide the necessary support and resources to do so.

Melnyk and colleagues (2010) offer a 7-step process, of which the first is setting the stage for inquiry; they call this Step 0. This step is followed by Step 1, which involves asking a clinical question using the patient population (P), area of interest or intervention (I), comparison group or intervention (C), outcome (O), and time (T) format. Problem identification is followed by Steps 2-4: searching the literature, critically evaluating the literature, and then integrating that information with patient preferences and clinical expertise. Decisions or changes made based on the evidence are then evaluated (Step 5). Lastly, results of the evidence-based practice are shared with others in the institution as well as with the broader health care community (Step 6).

Newhouse and colleagues (2007) incorporated some of the same steps into their model: defining a practice question using the PICO format, finding and evaluating the evidence, making decisions about the evidence and its relevance to practice, and sharing results when appropriate. In addition, they stress the use of interdisciplinary teams that include key stakeholders and they highlight the critical role that

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support from key organizational decision-makers plays in implementing recommended changes in practice.

What role does education play in enhancing the use of evidence?

Authors of a recent series of articles (Cronje & Moch, 2010; Moch & Cronje, 2010; Moch, Cronje, & Branson, 2010) argue persuasively for changing how students are taught EBP. While their review of the literature indicated that nurse educators use various methods to incorporate EBP into their curriculum, with "most of these approaches built upon long-standing commitments to helping students understand the scientific research process, think critically, and develop information literacy skills that enable them to find the evidence to inform their practice" (Moch et al., 2010, p. 5), they indicate that there is early evidence to support a much more active role for students in learning and promoting EBP in clinical practice. They offer a curriculum model that provides opportunities for students to "interact meaningfully with practicing nurses throughout the curriculum" (Moch et al., 2010, p. 11).

In the new curriculum model, based on evidence gathered over a 15-year period, students are viewed as leaders of new knowledge discussion groups that are "designed to build and maintain long-term and meaningful social networks among nurse educators, nursing students, and practicing nurses" (Moch & Cronje, 2010, p. 15). Moreover, they suggest that employing social networking principles and embracing students as opinion leaders may be an effective approach to infuse EBP into practice (Cronje & Moch, 2010). Given the slowness with which practicing nurses have embraced EBP, the solution may indeed lie with educators who are willing to implement novel methods of instruction that build on student talents and staff-nurse partnerships.

Lastly, no discussion of using evidence in practice would be complete without including reference to Florence Nightingale. While her efforts to improve the lot of nurses and patients

are well known, her role as one of the first health care professionals to use evidence is less known. However, it is Nightingale who developed the coxcomb, which is visual display (Audain, 1998), so that she could demonstrate how military deaths could be prevented. Using the evidence she collected and presented by means of the coxcomb, she was able to improve the unsanitary conditions that existed.

As 2010 marks the 100th year anniversary of her death, and in recognition of her contributions to the profession, including how to collect and describe evidence, an effort is underway to recognize nurses during the year. The result of collaboration between the Nightingale Initiative for Global Health, the Florence Nightingale Museum in London, and Sigma Theta Tau International is the 2010 International Year of the Nurse (www.2010iynurse.net), an effort to highlight the contributions nurses make to the health of the world's people. What better way to recognize a person who so appreciated the influence evidence can have on patient care that she created a new way to display that evidence! Our challenge is to honor this history by using evidence to guide our clinical practice, educational strategies, and policy development. To do less would be a travesty! **DN**

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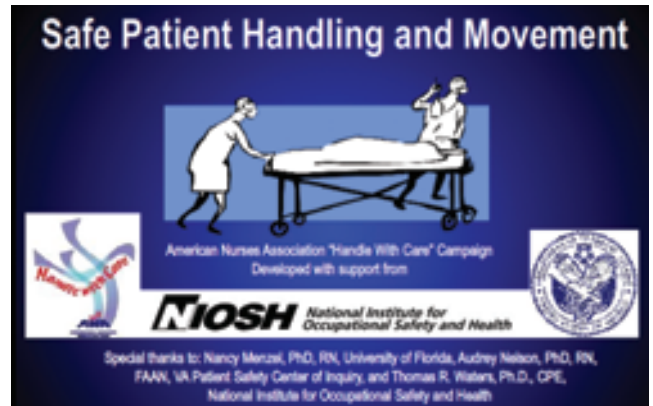
Resources

There are many Internet sources on how to create a clinical question that is structured to help direct the acquisition of evidence. These are just a few examples.

- This source, from Yale University, is concise but informative: <http://www.med.yale.edu/library/nursing/education/clinquest.html>
- Investigators at Arizona State University College of Nursing have added one more element (time) to the PICO formula to yield the acronym PICO(T): <http://nursingandhealth.asu.edu/evidence-based-practice/pico.htm>
- Another excellent resource is the Academic Center for Evidence-Based Practice, which is dedicated to advancing EBPr within an interdisciplinary context: <http://www.acestar.uthscsa.edu/default.html>
- The Virginia Henderson International Nursing Library, a free resource of the Honor Society of Nursing, Sigma Theta Tau International, provides online access to over 35,000 abstracts of research as well as to evidence-based information: <http://www.nursinglibrary.org/portal/main.aspx>
- Sigma Theta Tau International's Evidence Based Nursing Position Statement is also a helpful resource: http://www.nursingsociety.org/aboutus/PositionPapers/Pages/EBN_positionpaper.aspx

Safe Patient Handling Training Available

The final version of the *Safe Patient Handling Training for Schools of Nursing* has been released by the National Institute for Occupational Safety and Health (NIOSH), Publication No.: 2009-127. The material includes a booklet and the safe patient handling and movement Web-based training. Users can play the flash media from a computer, print the PDF of the booklet, or download the entire CD contents (booklet and flash presentation).



Curriculum for the program was developed in partnership with the National Institute for Occupational Safety and Health (NIOSH), the Veterans Health Administration (VHA), and the American Nurses Association (ANA).

The tools are available at www.cdc.gov/niosh/docs/2009-127/ for download. Please distribute this information widely to your faculty and students. **DN**

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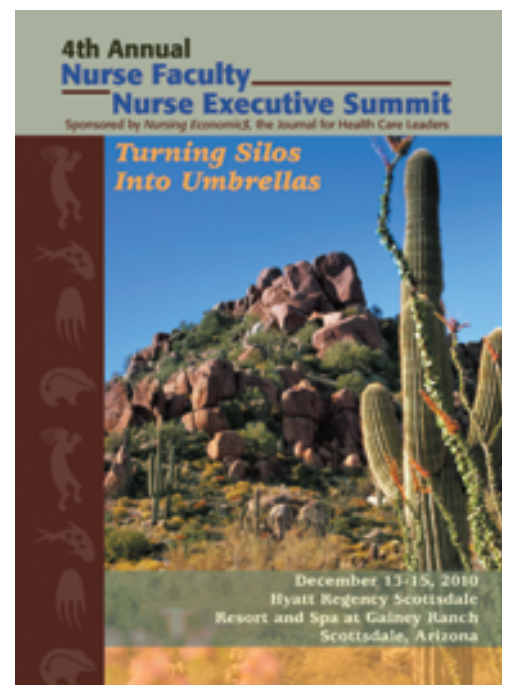


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