From best evidence to best practice

By Elizabeth A. Matos, PhD, RN, CNE

The days of doing things "because that's how we've always done it" are obsolete and even dangerous. In 2010, the Institute of Medicine Future of Nursing report recommended that evidence be used in clinical practice at least 90% of the time. This is where the role of inquiry becomes essential to promote identification of new practices.

Evidence-based practice (EBP)—the purposeful integration of researched best evidence into clinical practice—is considered the basis of safe and effective nursing practice to deliver exceptional, patient-centered care; improve patient outcomes and satisfaction; reduce healthcare costs; and increase clinician satisfaction.

Although we know that EBP improves patient outcomes, many nurses lack the confidence to implement it. How do you know if the information is current? Is it applicable to your patient population? Navigating the maze of information can be overwhelming, but we're here to help.

Step by step

Let's say that you've identified an increased number of patients with congestive heart failure (CHF) being readmitted to your facility within 30 days of discharge due to CHF complications. You ask: How can we reduce the readmission rate and improve outcomes for CHF patients?

Step 1: PICOT question

First, shape your search using the PICOT format, which stands for patient population; intervention or interest area; comparison of interventions, outcome, and time (optional). Based on PICOT, you can formulate the following question: *In discharged patients with CHF (P), does follow-up at a nurse-led clinic within 3 days of discharge (I) compared with no change in current discharge practice (C) reduce the number of readmissions within 30 days for complications of CHF(O)?*

Step 2: Search for relevant evidence

Next, find the information needed to answer your question. Where do you find this information? Start with your education department. Many facilities have access to online libraries, such as PubMed, the Cochrane Library, and the Cumulative Index to Nursing and Allied Health Literature. Search key words across multiple databases to ensure that the information is applicable and up-to-date. For our example, key search terms include nurse-led clinics, readmission for

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consider this

I work in the preoperative setting of an ambulatory surgical facility. Standard protocol was that all patients were NPO after midnight, even those patients not scheduled for surgery until 1 p.m. or later. Many of my patients who came in for afternoon surgery were agitated because they were hungry, and many would experience headaches because they didn't have their morning caffeine drink.

I asked one of the nurses with over 5 years' experience in the ambulatory center why patients with surgeries scheduled to start later in the day had to be NPO after midnight. She stated that's what anesthesia wanted and it's what we've always done. I knew that there had to be a better answer, so I decided to review the research.

I formulated my question in the PICOT format I had learned in nursing school: *Can patients who are scheduled for a surgery start time after 10 a.m. have an NPO status later than midnight and not experience pulmonary aspiration or gastric regurgitation complications during intubation or extubation?* I completed a search using scholarly databases with keywords such as NPO status, preoperative fasting, and aspiration in surgery. I also utilized professional association websites, such as the Association of periOperative Registered Nurses, the American Society of Anesthesiologists, and the American Society of PeriAnesthesia Nurses.

Several of my coworkers were also interested in this project and we worked together to critically analyze the research. We created a worksheet, and each of us reviewed three to four articles and documented the similarities between the research findings.

Armed with data that were less than 5 years old, we met with our immediate supervisor and presented our case. Our supervisor set up a meeting with the chief of anesthesia to whom we presented our data findings. Our supervisor and the anesthesiologist had many questions about the research. After much discussion, they agreed that this could improve many patient complaints while maintaining safety during intubation and extubation.

Once a protocol was decided on by the anesthesia providers, education was provided to all staff involved with preoperative, intraoperative, and postoperative care. There were many questions and we were able to provide evidence-based answers. Some of the staff members were happy with the status quo and didn't want to change. Fortunately, there were more staff members who welcomed new practice changes and were supportive.

The new guidelines were implemented, but only for those patients who had surgeries scheduled to begin after 1300. (Remember, start small and then you can include more patients in the future.) For healthy patients undergoing an elective procedure, the fasting time was changed to 2 hours for clear liquids and 6 hours for a light meal, such as toast and a clear liquid. Data were collected for 3 months and the process was reevaluated.

This project was successful because it improved preoperative hydration status without compromising patient safety. There were also fewer patient complaints of headaches because they could have their morning caffeine. Patient satisfaction scores also rose in the area of preoperative preparation.

We've now developed an EBP research council to consistently develop needed practice changes. The motto of our council is "always ask the question to improve patient outcomes and make a difference along the way." This has given us all a sense of ownership and leadership within our facility.

congestive heart failure and/or CHF, patient compliance for CHF, and acute exacerbations of CHF. You can also utilize your unit-based council or practice council to help complete the research review.

Step 3: Determine the best evidence

Create a tool or checklist to review the evidence and rate the information. If you're a novice when it comes to research methods and terms, ask for assistance from a mentor or nurse educator. Determine what's applicable to the clinical problem or situation by asking the following questions. Were the findings reported in the study valid? Are the findings relevant to the practice change? Is this practice change feasible for your patients?

EBP requires a thorough and methodical review of current research findings for practice. Research studies using randomized clinical trials are considered the gold standard. However, there are many other forms of relevant information, including published clinical practice guidelines. The best practice shouldn't be based on a single study; using information from multiple studies provides a solid foundation of information.

Consider the size of the research study group. If the study group was less than 50 participants, then that study alone may not be relevant. However, if you find several studies that utilized the same process and had the same clinical outcomes, then the validity of the practice increases. Also, if you find clinical practice guidelines that include a study population of more than 500, there's greater validity associated with the clinical outcomes.

Include colleagues who'll be involved with the process change. Shared governance empowers nurses at the bedside to make clinical decisions while improving patient outcomes. Utilizing a shared governance model strengthens staff professional

practice and forms strong relationships among healthcare professionals. As nurses, we can see how changes affect patient care and are in a prime position to help identify measures to improve care delivery. If your team has a voice in the change, there will be greater acceptance and involvement.

Step 4: Integrate the best evidence

Once you've received approval to implement the best practice in your clinical area, create a presentation that all involved stakeholders can understand. Give team members time to ask questions about the proposed change. Create a protocol or guideline and decide which patients to involve. The best practice can then be applied using clinical expertise, patient preference, and organizational values as a guide.

Let's go back to our question related to decreasing readmission rates for patients discharged with the diagnosis of CHF. You and your team meet with the case manager to discover that there's a trend of more than 40% of patients being readmitted for CHF complications within 30 days of discharge. The team reviews the best evidence and finds strong support for follow-up at a nurse-run clinic within 7 days of discharge. Evidence also supports a discharge nurse advocate for patient and family education, as well as follow-up phone calls within 2 days of discharge.

You and your team provide this information to the unit director and physicians, including the financial costs related to readmissions. Hospital management and the physicians agree to hire a dedicated discharge nurse advocate. Once the discharge nurse is employed, oriented to the position, and begins implementing the project, data collection begins.

Start small and work out the "bugs" before expanding to a larger group of patients. This gives you the opportunity to demonstrate the effectiveness of the practice change and allows for a select group of team members to become expert resources when the practice change is rolled out to a larger group of patients.

Step 5: Evaluate the results

After initiating an identified best practice, evaluate the outcomes or consequences of the change. Did the practice change improve patient outcomes as predicted? Were team members able to implement the change consistently? Were patients satisfied? For our example: Was the discharge process adequate? Did patients receive the needed follow-up care? During this stage, team members can also suggest process changes.

Step 6: Broadcast the outcomes

Distribute the results of your EBP change to staff throughout the entire facility. Often, other units are reviewing similar processes to improve patient care, employee satisfaction, and outcomes. Large organizations welcome positive and innovative practice changes, and have resources to help disseminate information across multiple facilities.

The clinical question in our example focused on follow-up for CHF patients, but could this discharge process improve other readmission rates? Getting the information out to other units creates an environment of continued inquiry throughout the facility.

did you know?

The roots of EBP in healthcare began over 50 years ago when Dr. Archie Cochrane published literature on the inefficiency of research evidence. This paved the way to randomized clinical trials and support for a systematic organization of information, leading to the development of the Cochrane Library—a gold standard for supportive evidence.

Barriers to EBP

Individual barriers

- No extra time
- Lack of knowledge about research and EBP or where to find resources
- No authority to make practice changes

Organizational barriers

- Administrative support is missing
- Leadership isn't interested in EBP
- Leadership assumes that EBP will increase financial burden

Adapted from: Connor L, Dwyer P, Oliveira J. Nurses' use of evidence-based practice in clinical practice after attending a formal evidence-based practice course: a quality improvement evaluation. *J Nurses Prof Dev.* 2016;32(1):E1-E7.

Also consider publishing your experience and findings or presenting them at a regional or national conference. This encourages other nurses to be more involved in utilizing EBP to improve patient outcomes and nurse satisfaction.

Implementation barriers

Most of us agree that EBP improves patient outcomes, as well as patient and employee satisfaction, but who has the time or expertise to conduct research of current evidence? Recognized individual barriers include not only time, but resources, meeting patient care demands, and lack of authority to make changes (see *Barriers to EBP*).

Organizational barriers also exist for effectively implementing EBP in nursing care. One major barrier is lack of support from the administration and management. Another challenge for organizations is linking improved processes and patient outcomes with cost savings. To overcome this hurdle, nurses need to show the cost benefit of using evidence to support practice instead of tradition and intuition.

Breaking down these barriers begins with education about the importance of EBP. Although new nurse graduates have some introduction to EBP, many still struggle with the overall details. Education can be accomplished through informal methods, such as weekly unit meetings or in-services, or through a more formal EBP course.

Roadmap for change

Creating an environment that's receptive to EBP is a first step in applying research to practice. As nurses, we play a key role in leading the implementation of EBP to its full extent. Never underestimate the power of a question or idea that can influence a practice change. By partnering with all healthcare providers, including physicians, we can make process improvements that can lead to better patient outcomes. ■

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