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Back to Basics: Implementing Evidence-Based Practice

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Purpose/Goal

To provide the learner with knowledge specific to implementing evidence-based practice.

Objectives

1. Define evidence-based practice (EBP).
2. Identify how EBP affects health care.
3. Discuss how nursing personnel can implement EBP.

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ABSTRACT

As health care transitions from volume-based care to value-based care, it is imperative that perioperative nurses implement evidence-based practices that support effective care. Implementing evidence-based practice is a challenge but improves patient outcomes, standardizes care, and decreases patient care costs. Understanding how care interventions work and how to implement them is important to compete in today's health care market. This "Back to Basics" article discusses how to identify, review, and appraise research; make recommendations to implement new practices; evaluate the outcomes of the implementations; and make necessary changes to facilitate evidence-based practice. *AORN J* 101 (January 2015) 107-112. © AORN, Inc, 2015. http://dx.doi.org/10.1016/j.aorn.2014.08.009

Key words: *evidence-based practice, EBP, perioperative nursing, volume-based care, value-based care.*

Health care is changing rapidly. Over the next few years, the transformation from volume-based to value-based health care will be significant. Health care alliances, mergers, and acquisitions are forming and facilities are joining forces to become major value-driven providers of health care. Facilities will have to transform care based on cost-effectiveness and evidence that the care provided is effective. Care cannot continue to be driven by tradition or provider preference. The most important factor in providing the best value-driven care is the implementation of evidence-based practice (EBP).

Evidence-based practice has existed for decades, and yet its routine use in the perioperative setting is lacking. Evidence-based practice combines the best available research with clinician experience and patient preference. Health care can be transformed at the bedside, one patient encounter at a time.[1] Without EBP, clinicians do not know whether their practices provide better outcomes or are cost-effective.[2] Another reason that practice in the perioperative setting is changing rapidly is the pace at which technologies evolve, and EBP enables perioperative professionals to look not only at which technologies work but also at what is most cost-effective.

Perioperative professionals are accountable for the care they give. Because research does not always get translated into practice, nurses may not know about evidence-based care and must actively search for it. In addition, nurses must be able to critically assess patients and the care provided, research and appraise the available evidence, and determine if and how the evidence can be applied to their practice.[2] Evidence-based practice skills assist perioperative team members who may have

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to justify why they practice a certain way by providing the rationale for their care. For example, if a surgeon does not want to cover his hair with a bouffant cap and asks the nurse to explain why, the nurse can reply "Because that is what our policy says." Or the nurse can explain that there are several research articles demonstrating that hair can harbor bacteria that can be dispersed into the air when shed and that completely covering hair on the head and facial hair protects the patient from exposure to potentially pathogenic microorganisms that can cause surgical site infection. Providing the rationale is far more likely to result in compliance with the request than citing a policy that may be interpreted by personnel as arbitrary.

Evidence-based practice also allows perioperative nurses to explain to patients the significance of certain care instructions, which helps engage patients in their care. Consider this example: a patient is undergoing surgery for a fractured arm and is instructed to elevate the arm to prevent swelling. The patient does not want to elevate her arm because it is a difficult position to maintain and questions the nurse as to why this must be done. The nurse could say "That is what your doctor has ordered." Or the nurse could explain that raising the arm reduces swelling that can occur when the arm is positioned lower than the level of the heart (ie, the rationale for elevating the arm), which could slow blood flow (ie, using terminology that is easy to understand without using terms such as compromise or dependent edema).[2] This example shows how EBP can be used at the bedside with every patient and individualized based on the patient's needs.

Evidence for patient care can be found in many places. Published literature is the best source, but there are EBP guidelines from professional organizations (eg, AORN *Perioperative Standards and Recommended Practices*[3]) that have reviewed the available evidence to produce guidelines appropriate for implementation. Other sources for EBP are case studies, published clinician experiences, and data that can be found in the facility's electronic medical record or by performing a literature search.

HOW-TO GUIDE

To implement EBP for any clinical practice, perioperative nurses should take the following steps.

Form a project team and identify the scope of the project. Identify team members, leaders, change agents, and any other specified team members. It is important to achieve buy-in from all disciplines involved in the project. The EBP team should agree on the scope, aim, and objectives before beginning the project.

Identify the evidence. This can be done individually or with a team of nurses who are interested in translating research into practice. Learning how to navigate available databases can be a challenge, and enlisting the help of a research librarian can be a valuable resource.[4]

Conduct a rapid review. Abstracts can provide a rapid summary of an article's evidence, and nurses can use abstracts to determine which articles are relevant to their topic or patient care issue. If working with a team, team members should work out a schedule for meetings and dividing the work among team members who are available during the identified work hours.[4]

Assign articles. Team members can conduct a critical appraisal of each assigned article and can focus on the quality of the articles by asking the questions listed in Figure 1.

Use appraisal tools. Using appraisal tools such as the ones used by AORN can be a great resource for evidence appraisal (Supplemental Figures 1 and 2). Performing appraisal is important because the evidence should be from credible sources and peer-reviewed publications. AORN's tool for rating appraised articles is presented in Figure 2.

Make practice recommendations. Identify best practices; based on the evidence, the team can determine which recommendations are best

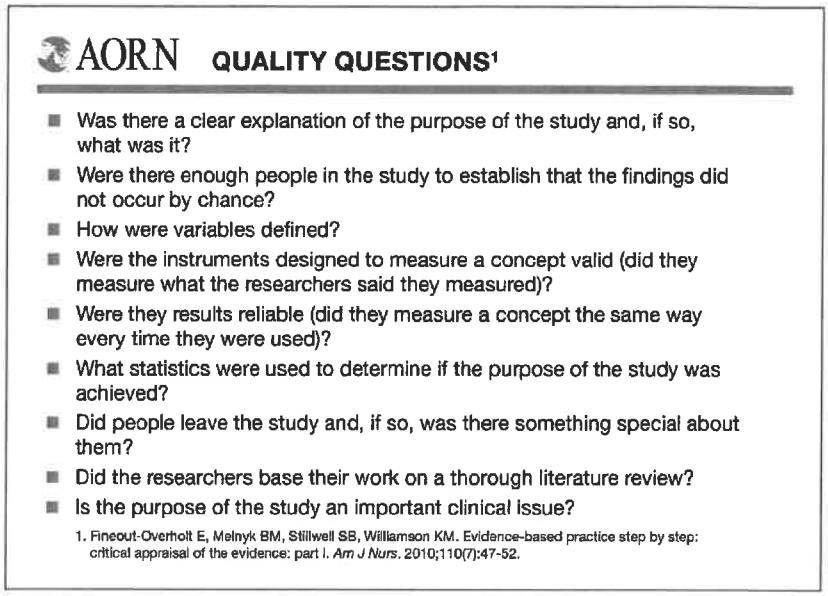

Figure 1. AORN's tool for appraising evidence. ***Reprinted with permission. Copyright © 2014, AORN, Inc. All rights reserved.***

for the practice setting and implement those that are needed.[5]

Identify implementation strategies. Goode and Harley[5] implemented a successful EBP project to integrate care pathway for patients undergoing elective colorectal surgery. These researchers offered the following suggestions when undertaking and implementing EBP projects:

- Outline the main steps of the project and gain institutional review board approval if needed. Identify areas affected such as the preoperative, intraoperative, and postoperative areas.
- Plan teaching sessions for team members who are affected by the project. Identify and create teaching materials by using presentations or hands-on teaching methods. Plan additional individual instruction as needed.
- Conduct a pilot test and provide support to team members on a daily basis to help them see change in a positive light; providing support will help to overcome negative feelings.
- Provide feedback forms to team members, and encourage feedback throughout the pilot-testing process.
- Make needed changes based on feedback. The success of any project depends on early preparation and planning and being open to changes during the pilot testing.
- Conduct additional pilot tests if needed.
- Implement the EBP project across applicable areas.
- Review the process every two years or as needed when evidence changes or practice needs change.

The Agency for Healthcare Research and Quality offers these strategies to implement EBP[1]:

- Choose a change champion who can identify potential problems and challenges during implementation.
- Test the EBP project in one area before applying it to other areas.
- Use multidisciplinary teams for implementing the practical aspects of the project.
- Use EBP publications (eg, AORN's *Guidelines for Perioperative Practice*[3]) that have already reviewed the EBP recommendations and offer useful tools for point-of-care use.
- Use technology to integrate EBP in electronic health records (eg, computerized decision support and prompts in clinical care).

AORN EVIDENCE RATING MODEL

Appraisal Score Research	Appraisal Score Non-Research	Evidence Rating	Evidence Requirements
IA	IVA Regulatory	**1: Strong Evidence** **1: Regulatory requirement**	*Interventions or activities for which effectiveness has been demonstrated by strong evidence from rigorously-designed studies, meta-analyses, or systematic reviews, rigorously-developed clinical practice guidelines, or regulatory requirements.* • Evidence from a meta-analysis or systematic review of research studies that incorporated evidence appraisal and synthesis of the evidence in the analysis. • Supportive evidence from a single well-conducted randomized controlled trial. • Guidelines developed by a panel of experts, that derive from an explicit literature search strategy, and include evidence appraisal and synthesis of the evidence.
IB IIA, IIB IIIA, IIIB	IVB VA, VB	**2: Moderate Evidence**	*Interventions or activities for which the evidence is less well established than for those listed under "recommended for practice."* • Supportive evidence from a well-conducted research study. • Guidelines developed by a panel of experts which are primarily based on the evidence but not supported by evidence appraisal and synthesis of the evidence. • Non-research evidence with consistent results and fairly definitive conclusions.
IC IIC IIIC	IVC VC	**3: Limited Evidence**	*Interventions or activities for which there are currently insufficient data or data of inadequate quality.* • Supportive evidence from a poorly conducted research study. • Evidence from non-experimental studies with high potential for bias. • Guidelines developed largely by consensus/expert opinion. • Non-research evidence with insufficient evidence or inconsistent results. • Conflicting evidence, but where the preponderance of the evidence is in support of the recommendation.
No requirement	No requirement	**4: Benefits Balanced With Harms**	*Selected interventions or activities for which the AORN Recommended Practices Advisory Board (RPAB) is of the opinion that the desirable effects of following this recommendation outweigh the harms.*
No requirement	No requirement	**5: No Evidence**	*Interventions or activities for which no evidence was found during the literature search completed for the recommendation.* • Consensus opinion of the RPAB.

June 28, 2013

Figure 2. AORN's tool for rating articles. ***Reprinted with permission. Copyright © 2014, AORN, Inc, 2170 S. Parker Road, Suite 400, Denver, CO 80231. All rights reserved.***

- Provide education as needed to change practice.
- Implement interactive education (eg, simulation, online education modules) along with other implementation strategies to better promote EBP changes.
- Use change champions and opinion leaders to promote EBP and changes in current practice.
- Monitor outcomes of the change and communicate them to the entire perioperative team.

BENEFITS

Evidence-based practice benefits everyone in health care. Facilities that implement EBP are standardizing care for patients based on what has been shown to yield the best outcome. Evidence-based practice provides the value in value-based health care. Patient outcomes and core measures improve when care providers follow EBP. Evidence-based practice is more cost-effective, which is important for facility and provider reimbursement.

Patients benefit knowing they are receiving care based on what works best rather than historical precedence. As a result, patients will be more informed health care consumers because they will understand what works and what does not, and then be able to base their treatment decisions on knowledge rather than on what their provider tells them to do.

Health care providers are accountable for the care they give, and reimbursement is tied to their performance. Practicing evidence-based medicine and nursing gives providers confidence that they

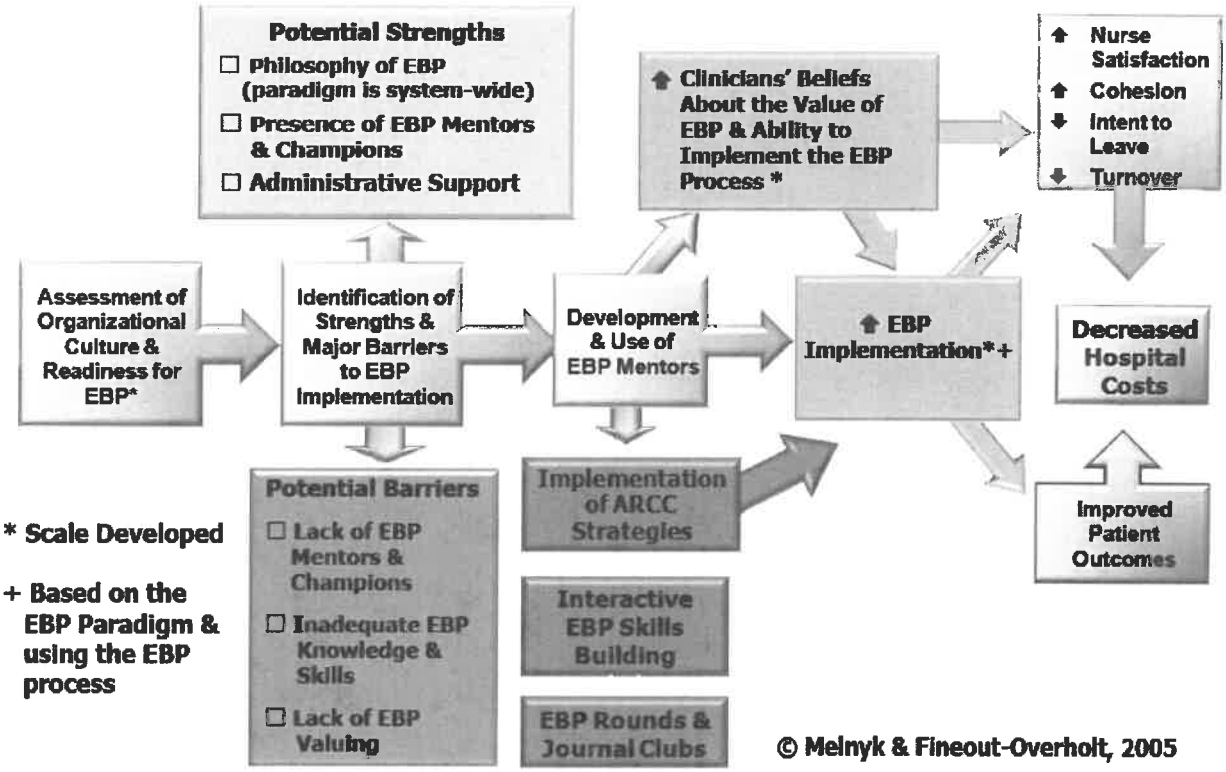

Figure 3. Advancing Research and Clinical Practice Through Close Collaboration (ARCC) model. ***Reprinted with permission from Bernadette Mazurek Melnyk, PhD, RN, CPNP/PMHNP, FAANP, FNAP, FAAN, and Ellen Fineout-Overholt, PhD, RN, FNAP, FAAN.***

are providing the best health care possible to their patients.

STRATEGIES FOR SUCCESS

A study of an EBP nurse mentorship program performed by Wallen et al[6] showed clear benefits. The program helped to improve nurses' perceptions that the facility provided a patient safety culture (an example of a safe culture assessment tool can be accessed at *http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/hospital/index.html*), improved implementation of EBP, increased job satisfaction, and helped improve nurse retention. These researchers have developed a model to guide implementation of EBP on a system-wide basis (Figure 3).[6]

Facility personnel should assess their culture for EBP, identify barriers with a plan to overcome them, and enlist mentors to work directly with bedside care team members. To achieve culture change, these researchers[6] recommend having

- leaders who support an EBP culture along with a shared governance model;
- the resources available to support the EBP process;
- initiatives that include administrators, not just clinicians;
- evidence-based practice mentors (eg, nurse leaders, nurse managers, clinical nurse specialists, nurses with doctoral degrees) who are knowledgeable about the EBP process, willing to mentor bedside clinicians, and able to lead EBP projects;
- workshops to develop EBP skills and assist nurses in becoming EBP champions to promote and sustain the process; and
- continuing support of mentors (eg, celebrations of successful projects, educational activities.

WRAP-UP

As health care continues its progression toward value-based practice, it is imperative for nurses to implement EBP to drive improvement in patient outcomes and increase reimbursement to facilities and providers. Although change, including implementing EBP, is difficult, this "Back to Basics" article addresses some strategies to implement and sustain EBP.

Patient care must be standardized based on what yields the best outcomes and what is cost-effective; facilities that fail to provide evidence-based care will not survive in this new climate. The health care system cannot continue to allow individual practitioners to determine practice the way they always have. Practitioners must prove that what they are doing truly improves patient outcomes and improves the health of perioperative patients.

SUPPLEMENTARY DATA

The supplementary figures associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.aorn.2014.08.009. AORN

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