



# EVIDENCE-BASED PRACTICE *Step by Step*

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## *Igniting a Spirit of Inquiry: An Essential Foundation for Evidence-Based Practice*

*How nurses can build the knowledge and skills they need to implement EBP.*

This is the first article in a new series from the Arizona State University College of Nursing and Health Innovation's Center for the Advancement of Evidence-Based Practice. Evidence-based practice (EBP) is a problem-solving approach to the delivery of health care that integrates the best evidence from studies and patient care data with clinician expertise and patient preferences and values. When delivered in a context of caring and in a supportive organizational culture, the highest quality of care and best patient outcomes can be achieved.

The purpose of this new series is to give nurses the knowledge and skills they need to implement EBP consistently, one step at a time. Articles will appear every two months to allow you time to incorporate information as you work toward implementing EBP at your institution. Also, we'll schedule "Ask the Authors" call-ins every few months to provide a direct line to the experts to help you resolve questions. Details about how to participate in the calls will be published with January's *Evidence-Based Practice: Step by Step*.

**D**o you ever wonder why nurses engage in practices that aren't supported by evidence, while not implementing practices substantiated by a lot of evidence? In the past, nurses changed hospitalized patients' IV dressings daily, even though no solid evidence supported this practice. When clinical trials finally explored how often to change IV dressings, results indicated that daily changes led to higher rates of phlebitis than did less frequent changes.<sup>1</sup> In many hospital EDs across the country, children with asthma are treated with albuterol delivered with a nebulizer, even though substantial evidence shows that when albuterol is delivered with a metered-dose inhaler plus a spacer, children spend less time in the ED and have fewer adverse effects.<sup>2</sup> Nurses even disrupt patients' sleep, which is important for restorative healing, to document blood pressure and pulse rate because it's hospital policy to

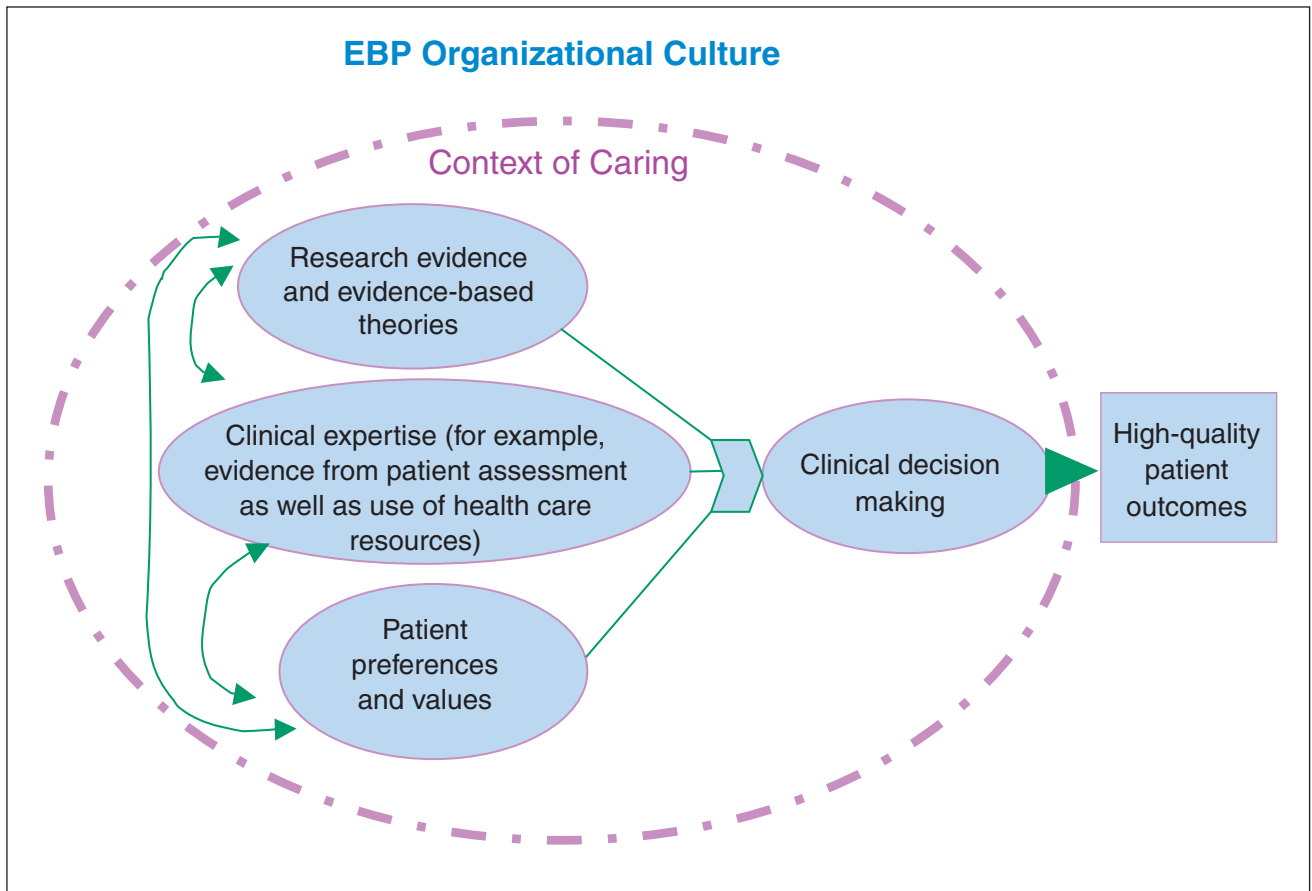
take vital signs every two or four hours, even though no evidence supports that doing so improves the identification of potential complications. In fact, clinicians often follow outdated policies and procedures without questioning their current relevance or accuracy, or the evidence for them.

across the care continuum perform a multitude of interventions (for example, administering medication, positioning, suctioning) that should stimulate questions about the evidence supporting their use. When a nurse possesses a spirit of inquiry within a supportive EBP culture, she or he

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When a spirit of inquiry—an ongoing curiosity about the best evidence to guide clinical decision making—and a culture that supports it are lacking, clinicians are unlikely to embrace evidence-based practice (EBP). Every day, nurses

can routinely ask questions about clinical practice while care is being delivered. For example, in patients with endotracheal tubes, how does use of saline with suctioning compared with suctioning without saline affect oxygen saturation?



**Figure 1.** The EBP Paradigm: the merging of science and art. EBP within a context of caring and an EBP culture results in the highest quality of health care and patient outcomes. © Melnyk and Fineout-Overholt, 2003.

In patients with head injury, how does elevating the head of the bed compared with keeping a patient in a supine position affect intracranial pressure? In postoperative surgical patients, how does the use of music compared with no use of music affect the frequency of pain medication administration?

The Institute of Medicine has set a goal that by 2020, 90% of all health care decisions in the United States will be evidence based,<sup>3</sup> but the majority of nurses are still not consistently implementing EBP in their clinical settings.<sup>4</sup> To foster outcomes-driven health care in which decisions are based on evidence, providers and health care systems need a

comprehensive approach to ensure that their results are measured.<sup>5</sup> Without EBP, patients don't receive the highest quality of care, health outcomes are seriously jeopardized, and health care costs soar.<sup>6</sup> Findings from recent studies also indicate that when nurses and other health care providers engage in EBP, they experience greater autonomy in their practices and a higher level of job satisfaction.<sup>7</sup> At a time when this country is facing the most serious nursing shortage in its history, empowering nurses to routinely engage in EBP may lead to less turnover and lower vacancy rates, in addition to improving the quality of health care and patient outcomes.

To accelerate the use of EBP by nurses and other health care providers, some insurers have instituted pay-for-performance programs that offer clinicians incentives to follow evidence-based guidelines. And Medicare no longer reimburses hospitals for treating preventable hospital-acquired injuries or infections (such as falls, pressure ulcers, or ventilator-associated pneumonia). Although these measures should improve the overall quality of care in our hospitals, it's well known that extrinsic motivators are typically not more successful in facilitating a change in behavior than intrinsic motivators. Therefore, for EBP to accelerate and

thrive in the U.S. health care system, nurses must have

- a never-ending spirit of inquiry and consistently question current clinical practices.
- strong beliefs in the value of EBP.
- knowledge of and skills in EBP along with the confidence to use it.
- a commitment to deliver the highest quality evidence-based care to patients and their families.

In addition, health care institutions must sustain a culture that embraces EBP, including providing clinicians the support and tools they need to engage in evidence-based care.

EBP is a problem-solving approach to the delivery of health care that integrates the best evidence from well-designed studies and patient care data, and combines it with patient preferences and values and nurse expertise.<sup>8,9</sup> However, there's no magic formula for what percentage of a clinical decision should be based on evidence or patient preferences or nurse expertise. The weight given to each of these three EBP components varies according to the clinical situation. For example, evidence-based guidelines might indicate that a young child with an ear infection receive amoxicillin and clavulanate (Augmentin) if the infection hasn't resolved

### Questions that Spark a Spirit of Inquiry

- *Who* can I seek out to assist me in enhancing my evidence-based practice (EBP) knowledge and skills and serve as my EBP mentor?
- *Which* of my practices are currently evidence based and which don't have any evidence to support them?
- *When* is the best time to question my current clinical practices and with whom?
- *Where* can I find the best evidence to answer my clinical questions?
- *Why* am I doing what I do with my patients?
- *How* can I become more skilled in EBP and mentor others to implement evidence-based care?

with amoxicillin. However, if the child dislikes the taste and it's likely that the medication won't be taken, patient preference should outweigh the best practice guideline and an alternative antibiotic should be prescribed.

Although EBP may be referred to as evidence-based medicine, evidence-based nursing, or evidence-based physical therapy within various disciplines, we advocate referring to all of these as *evidence-based practice*, in order to stimulate transdisciplinary evidence-based care and avoid the specialized terminology that can isolate the various health professions.

When nurses implement EBP within a context of caring and a supportive organizational culture, the highest quality of care is delivered and the best patient, provider, and system outcomes are achieved (see Figure 1).<sup>10</sup> Despite outcomes being substantially

better when patients receive evidence-based care, nurses and other health care providers often cite barriers that prevent its delivery, including<sup>10,11</sup>

- inadequate EBP knowledge and skills.
- a lack of EBP mentors to work with providers at the point of care.
- inadequate resources and support from higher administration.
- insufficient time, especially when there are demanding patient caseloads and staffing shortages.

Conversely, a number of factors facilitate the implementation of EBP, including<sup>8,12,13</sup>

- EBP knowledge and skills.
- belief in the value of EBP and the ability to implement it.
- a culture that supports EBP and provides the necessary tools to sustain evidence-based care (for example, access to computer databases at the point of care and time to search for evidence).
- EBP mentors (advanced practice clinicians with expertise in EBP and organizational and individual behavior-change strategies) who work directly with clinicians at the point of care in implementing EBP.

Once nurses gain EBP knowledge and skills, they realize it's not only feasible within the context of their practice setting, but that it reignites their passion for

### Strategies for Building a Spirit of Inquiry

**W**rite "WHY?" on a poster and place it in the staff lounge or restroom to inspire questions from nurses about why they're engaging in certain practices with their patients. Gather the responses in an answer box. After one month, take the responses and arrange them according to common themes. Address the themes in a staff meeting.

Review and answer the *Questions that Spark a Spirit of Inquiry*. Create a poster with these questions and post them where your colleagues will see them. Think about these clinical questions when caring for your patients.

their roles and assists them in delivering a higher quality of care with improved patient outcomes. We use the term *Step Zero* to refer

We'll use this case in each column to focus on successive steps of the EBP process. In the meantime, we encourage you to answer the

## Step Zero refers to the continual cultivation of a spirit of inquiry.

to the continual cultivation of a spirit of inquiry as an essential foundation for EBP, and we recommend the routine use of a standard set of questions in practice (see *Questions that Spark a Spirit of Inquiry*) and the use of the strategies in *Strategies for Building a Spirit of Inquiry*.

Remember, EBP starts with a spirit of inquiry (Step Zero). As you embark on this wonderful journey to promote the highest quality of care and the best outcomes for your patients, reflect upon Step Zero, the EBP paradigm, and how you practice care. The *Case Scenario for EBP: Rapid Response Teams* will provide a context for learning EBP throughout the next several columns.

*Questions that Spark a Spirit of Inquiry* and implement two *Strategies for Building a Spirit of Inquiry* in order to start your own EBP journey and begin building a spirit of inquiry with your colleagues at work. ▼

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### Case Scenario for EBP: Rapid Response Teams

You're a staff nurse on a busy medical-surgical unit. Over the past three months, you've noticed that the patients on your unit seem to have a higher acuity level than usual, with at least three cardiac arrests per month, and of those patients who arrested, four died. Today you saw a report about a recently published study in *Critical Care Medicine* on the use of rapid response teams to decrease rates of in-hospital cardiac arrests and unplanned ICU admissions. The study found a significant decrease in both outcomes after implementation of a rapid response team led by physician assistants with specialized skills.<sup>14</sup> You're so impressed with these findings that you bring the report to your nurse manager, believing that a rapid response team would be a great idea for your hospital. The nurse manager is excited that you've come to her with these findings and encourages you to search for more evidence to support this practice and for research on whether rapid response teams are valid and reliable.

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