



The Iowa Model of Evidence-Based Practice to Promote Quality Care: An Illustrated Example in Oncology Nursing

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Evidence-based practice (EBP) improves the quality of patient care and helps control healthcare costs. Numerous EBP models exist to assist nurses and other healthcare providers to integrate best evidence into clinical practice. The Iowa Model of Evidence-Based Practice to Promote Quality Care is one model that should be considered. Using an actual clinical example, this article describes how the Iowa Model can be used effectively to implement an actual practice change at the unit or organizational level.

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Nurses understand that evidence-based practice (EBP) improves the quality of patient outcomes while controlling the cost of healthcare (Melnyk, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012). But even in the year 2014, barriers and roadblocks exist to implementing EBP at the bedside or chair side. The Institute of Medicine estimated that it takes more than 17 years to implement a research finding into clinical practice (Institute of Medicine, 2001). Although research may exist that should be translated into practice, the time it takes to deliver these research-based interventions to patients takes too long. In their study of 1,054 RNs, Melnyk et al. (2012) discovered that although nurses value EBP, they required education, access to information, and time to implement EBP into daily practice. Nurses and other healthcare providers want their practice based in evidence, but they also acknowledge the barriers of lack of education and time to actually implement and use EBP.

EBP is a problem-solving approach to clinical decision making that integrates the best evidence from well-designed studies with a clinician's expertise along with patients' preferences and values

(Melnyk et al., 2012). Numerous EBP models are available to help nurses organize and systematically track progress in implementing evidence into practice, including the Stetler Model of Research Utilization (Stetler, 2001), the Iowa Model of Evidence-Based Practice to Promote Quality Care (hereafter referred to as the Iowa Model) (Titler et al., 2001), and the Johns Hopkins Nursing Model (Newhouse, Dearholt, Poe, Pugh, & White, 2005). These models provide a step-by-step guide on how to take a clinical problem and match it with an intervention based on research to make an organizational or departmental change to practice. Using a model for EBP change also can assist nursing departments in better focusing their limited fiscal and personnel resources on critical EBP activities (Gawliński & Rutledge, 2008). The current article will focus on one such model, the Iowa Model (Titler et al., 2001), as an example of how using a model can help focus on the process of implementing evidence-based changes (see Figure 1). The Iowa Model was selected because nurses find it intuitively understandable and it has been used in numerous academic settings and healthcare institutions (Gawliński & Rutledge, 2008).

Overview of Model

The Iowa Model can help nurses and other healthcare providers translate research findings into clinical practice while improving outcomes for patients. The first step in the Iowa Model is to identify either a problem-focused trigger or a knowledge-focused trigger where an EBP change might be warranted. Problem-focused triggers are those problems that derive from risk management data, financial data, or the identification of a clinical problem (e.g., patient falls). Knowledge-focused triggers are those that come forward when new research findings are presented or when new practice guidelines are warranted.

The next step in the Iowa Model is for the nurse or team to determine whether the problem at hand is a priority for the organization, department, or unit in which they work. Those problems that may have higher volume or higher costs associated likely will have higher priority from the organization. Organizational buy-in is crucial when working on EBP issues, so knowing the prioritization of the problem is important.

Once the priority has been determined, the next step is to form a team consisting of members that will help develop, evaluate, and implement the EBP change. The composition of the team will be determined by the problem at hand. Titler et al. (2001) pointed out that the team should include interested interdisciplinary stakeholders. This step is important and should include team players outside of those from nursing.

Once a team has been formed, the next step is to gather and critique pertinent research related to the desired practice change. The most important portion of this step is to form a good question (using the PICOT method [Guyatt, Drummond,

Meade, & Cook, 2008)) and then conduct a literature search for actual research studies that pertain to the question at

hand. This is an excellent time to enlist a medical librarian who can help search for and retrieve studies to aid in choosing an

intervention or answer to the problem or knowledge-focused question.

The next step is that the team must critique the available studies to determine whether the study with the tested intervention is scientifically sound. Not every research article published in a professional journal has appropriate scientific merit. Sometimes articles have a small sample size or perhaps use a tool lacking reliability or validity, so critiquing every article prior to considering the results of that study for implementation into a practice change is important. Advanced practice nurses are ideal members of the team to assist with the critique of respective research studies (Titler et al., 2001). Titler et al. (2001) also suggested pairing novice team players with members who are experts or more experienced in critiquing research.

At this juncture, the team needs to decide whether sufficient research exists to implement a practice change. Titler et al. (2001) suggested the following criteria be considered when determining whether research can be implemented into practice: (a) consistent findings exist from numerous studies to support the change, (b) the type and quality of the studies, (c) the clinical relevance of the findings, (d) the number of studies with similar sample characteristics, (e) the feasibility of the findings in practice, and (f) the risk-benefit ratio. If a majority of the criteria can be met, the team should then plan to implement the intervention in a pilot practice change. If adequate research does not exist, an actual research study might be conducted.

The next step would be to implement the intervention into a pilot practice change. Notice here that the team would not conduct a full practice change for the entire organization, but rather would implement a pilot change in one or two smaller practice areas first; the team needs to ensure the change is feasible and will result in improved outcomes before full-scale implementation. If the intervention is successful in pilot implementation, it can be converted to an organization practice change. Even after a practice change has been implemented, the team should continue to evaluate the practice change, watching for any

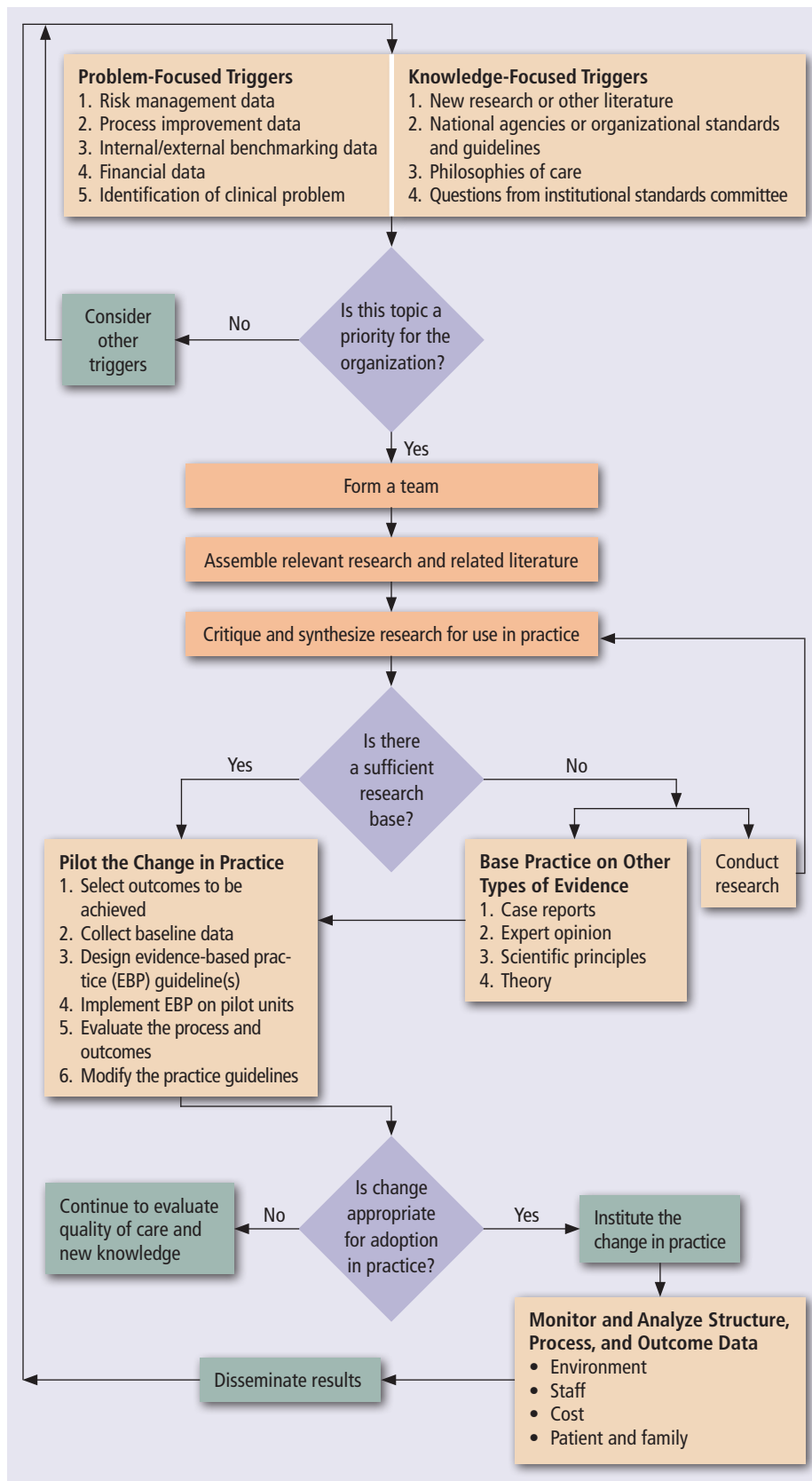


FIGURE 1. The Iowa Model of Evidence-Based Practice to Promote Quality Care

Note. Figure courtesy of Marita Titler. Used with permission.

deviation in practice or a decrease in the outcomes.

An Illustrated Example

A clinical example will now be used to illustrate how a group of nurses and other healthcare providers could use the Iowa Model to make a change to clinical practice and improve overall patient outcomes. A group of oncology nurses working on an inpatient stem cell transplantation unit were particularly concerned about the high level of patient falls, some of which resulted in patient injury. The group, led by an advanced practice nurse, decided to use the Iowa Model to help guide the process of finding a potential practice change. The team learned that patient falls with injury were an overall concern for the organization, given that they not only resulted in poorer patient outcomes but also had significant financial costs for the organization. The group of oncology nurses formed a falls prevention team and invited interested interdisciplinary members, including physicians, nurses, physical therapist, occupational therapists, and other hospital employees, to join.

The team then asked the medical librarian to help them collect relevant randomized, controlled trials and other studies, and the team critiqued those studies for scientific merit. The team came across numerous studies that supported patients wearing bright-colored, non-skid socks when at risk for falls. The socks were implemented as a practice change to two inpatient units as a pilot. During the four-

month pilot, the team documented a decrease in patient falls on units where the patients were wearing the bright-colored, non-skid socks. The team then decided to implement the practice change in the entire organization and are continuing to monitor monthly patient fall levels.

Conclusion

Nurses want to implement interventions in their practice based on the highest levels of evidence. However, nurses also have noted that they need time and more education to translate current evidence into practice. The use of an EBP model, such as the Iowa Model (Titler et al., 2001), can help nurses organize the practice change and provide them with a step-by-step process on how make the change for a unit or organization.

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