
Implementing Evidence-Based Nursing Practice: An Overview

GETTING STARTED

To start, let us review the definition and description of evidence-based nursing practice presented in Chapter 1. Evidence-based practice (EBP) definitions are varied, but all include evidence from three broad areas: empirical studies, other forms of published evidence (e.g., review articles, clinical pathways, protocols), available clinical expertise and resources, and patient preferences/nuisances. Melnyk and Fineout-Overholt (2005) define EBP as a problem-solving approach using current best evidence to answer a clinical question incorporating one's own clinical expertise and patient values and preferences. As I presented in Chapter 1, I would argue that a better term to differentiate the uniqueness of nursing practice from other disciplines would be evidence-based nursing practice (EBNP) and will refer to it as EBNP from this point on.

Evidence-Based Nursing Practice Models

Several models have contributed conceptually to the implementation of evidence-based nursing practice. The Stetler model (Stetler, 2001), the Iowa model (Titler et al., 2001), the John Hopkins Evidence-Based Practice Model (Newhouse, et al., 2007), the ACE Star Model (Stevens, 2004), the Caledonian Development Model (Tolson, Booth, & Lowndes, 2008), and the Evidence-Based Practice Model for Staff Nurses (Reavy & Tavernier, 2008). Three of the most common models used today are discussed next.

The Stetler model, first developed in 1976 and refined in 1994, went through an update in 2001. Five phases are included in the process of performing EBNP (Stetler, 2001):

1. Preparation—This phase includes the identification of the problem/issue and validation of the problem with evidence.

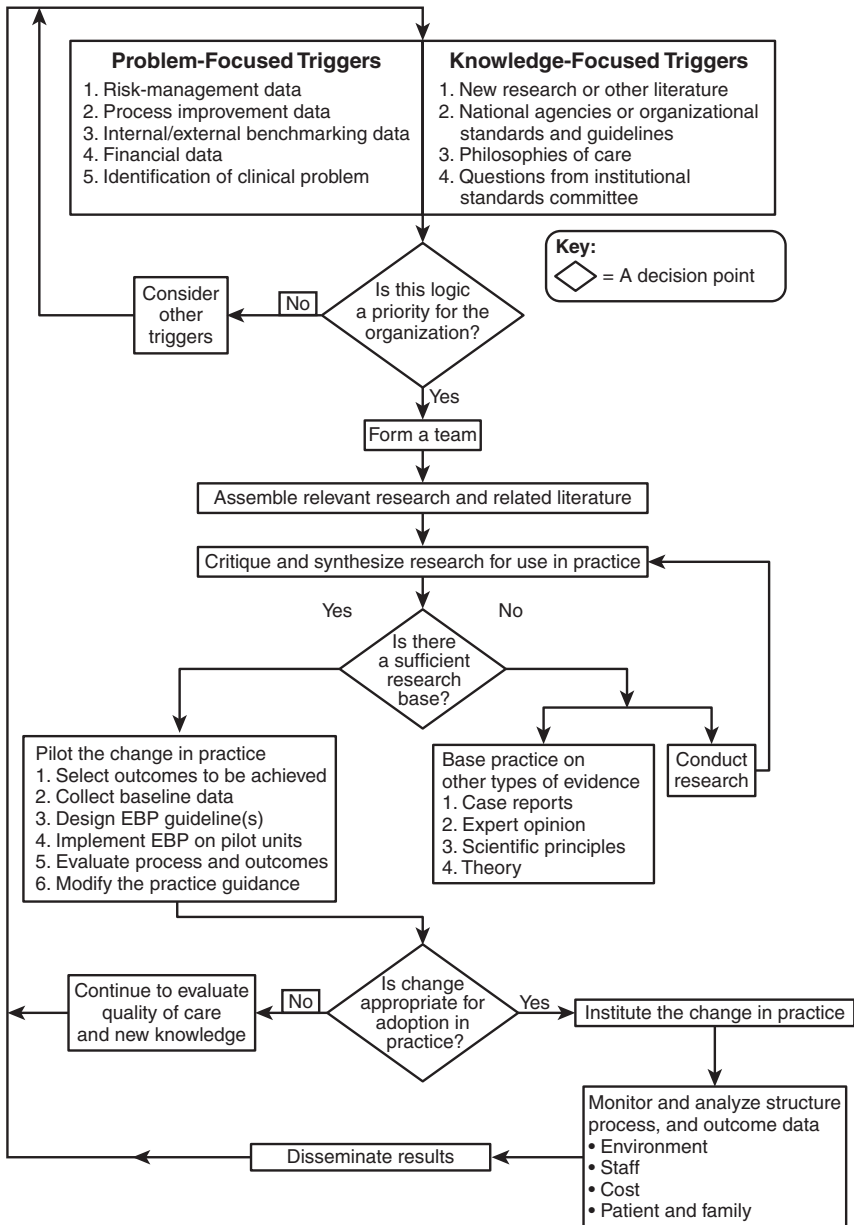
2. Validation—Critique and synthesis of the evidence (empirical and non-empirical evidence, systematic reviews, etc.). Rate the level and quality of each item of evidence using a “table of evidence.” Eliminate noncredible sources. Process ends here if there is no evidence or it is clearly insufficient.
3. Comparative evaluation/Decision making—Synthesize the cumulative findings. Make a decision about what can be used. At this point, there is an option to conduct own research if findings cannot be used.
4. Translation/Application—Decide on what level of application (individual, group, organization). Develop proposal for practice change. Create strategies for formal dissemination and planned change. Consider a pilot project.
5. Evaluation—Evaluation can be formal or informal. Consider costs. Include both formative and summative evaluations of outcomes.

The Iowa model starts with a trigger/problem. These triggers may be knowledge focused or problem focused. If the problem is a priority for the organization, then a team is formed. The team is composed of key stakeholders, clinicians, staff nurses, and other champions of evidence-based practice. The next step is synthesizing the evidence. A pilot of the practice change occurs if there is sufficient evidence to support the change. Evaluation of outcomes and dissemination of findings would follow. The Iowa model is depicted in **Figure 5-1**.

Hermes et al. (2009) used the Iowa model to develop an evidence-based imminent suicide risk instrument. The trigger for the project began with the decision-making process for placing patients on suicide watch. Nurses questioned whether the current protocol was accurate in identifying patients at risk. The second step was determining if the topic was a priority for the organization. All members of the unit-based council believed it was important to examine the appropriateness of the current tool. The third step was to form a team, which included two staff nurses from the unit-based council to lead the team, two clinical nurses to complete the project, and the hospital’s nursing research facilitator who served as advisor to the project. The fourth step involves assembling and analyzing the research. This process included 11 studies that addressed assessment of suicide risk in an inpatient setting. A grading schema used to grade the quality of evidence included the following system:

- A—evidence from well-designed meta-analysis or integrated literature reviews
- B—evidence from well-designed controlled trials, both randomized and nonrandomized
- C—evidence from observational studies, such as descriptive and correlational
- D—evidence from expert opinion or multiple case reports

Figure 5-1 The Iowa Model of Evidence-Based Practice to Promote Quality Care.

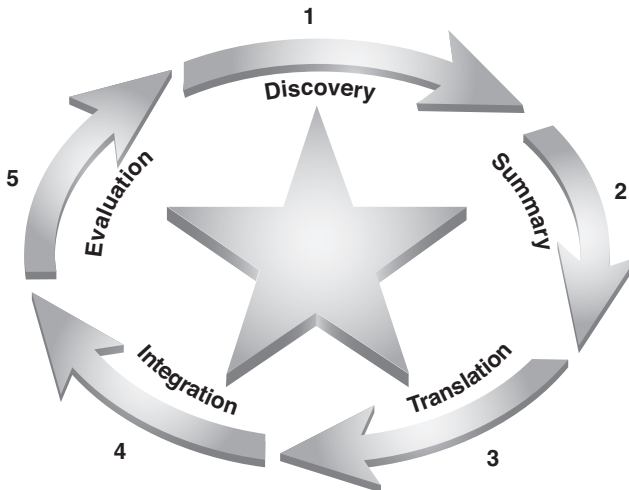


Reprinted with permission from Titler et al. (2001). The Iowa model evidence-based practice to promote quality care. *Critical Care Nursing Clinics of North America*, 13(4), 497–509. University of Iowa Hospitals and Clinics.

In the sample study, most evidence was rated C or D. A critical analysis of the evidence is part of the fourth step. The fifth step is determining if there is enough evidence to pilot the practice change. The team decided that there was sufficient evidence to move forward as a unit-based quality improvement initiative. The hospital librarian assisted with literature searches to find an instrument that would contain questions about suicide ideation but also assess for signs and symptoms of anxiety and agitation. The Behavioral Activity Rating Scale is helpful in assessing agitation in this patient population. Items from the Hamilton Anxiety Scale, used in a previous study on this unit, were added to the Behavioral Activity Rating Scale. A pilot test of this instrument followed. The sixth step is implementing the practice change into practice. This step included approval from the forms committee at the hospital and intensive in-service education for all staff nurses involved. To evaluate outcomes 6 weeks after the initial implementation, a representative of the unit-based council questioned staff nurses about their satisfaction with the new instrument.

The ACE (Academic Center for Evidence-Based Practice) Star Model is another frequently used evidence-based practice model. Visually depicted (**Figure 5-2**), it presents a framework for understanding the relationships between

Figure 5-2 The ACE Star Model.



Reprinted with permission from Stevens, K. R. (2004). ACE Star Model of EPB: Knowledge Transformation. The University of Texas Health Science Center at San Antonio: Academic Center for Evidence-Based Practice.

various stages of knowledge transformation. Knowledge transformation is defined as the “conversion of research findings from primary research results, through a series of stages and forms, to impact on health outcomes by way of evidence-based care (Stevens, 2004).” It provides a framework for systematically putting evidence-based practice processes into action. Each point of the star represents a stage of knowledge transformation:

1. Knowledge discovery—new knowledge discovered through traditional empirical research including both quantitative and qualitative studies
2. Evidence summary—synthesizing across the research over a particular issue or problem; includes findings from systematic reviews and meta-analyses
3. Translation into practice recommendations—summarized research evidence is combined with other sources of evidence such as clinical expertise; then this holistic evidence is translated for the specific population and setting
4. Integration into practice—implementing the practice change through formal and informal methods; taking into account individual and organizational factors that affect adoption and integration into the system
5. Evaluation—includes the evaluation of the practice change on patient health outcomes and provider and client satisfaction

With the exception of the ACE Star Model, other models described in this discussion offer a sequential, step-wise approach to moving evidence into practice. By contrast, the ACE Star Model explains the very nature of the knowledge necessary to transform practice. As knowledge is translated into the next stage, it becomes increasingly useful and useable at the bedside and in direct patient care. Understanding the concepts in the ACE Star Model is fundamental to moving knowledge into clinical decision making (K. R. Stevens, personal communication, April 20, 2010).

Common threads woven across the majority of these evidence-based practice models include identification of the clinical problem through data gathering techniques, synthesizing the evidence, translating the evidence into a practice change, and implementation and evaluation of the practice change. Involvement of key stakeholders such as staff nurses plays an important role in these models. I would like to make the argument that having multiple models to choose from can make it difficult for the staff nurse. To compound the problem, there is lack of uniformity of terminology across the models. Complex terms, unique to each model, make it difficult to understand the process.

Even though the sample models of evidence-based practice described here provide needed guidelines for success, there are still challenges noted in the literature. It is still not clear what evidence should be used in the

evidence-based nursing practice process. Historically, quantitative empirical research studies, particularly randomized controlled trials, were held as the highest level of evidence. Current literature suggests using a broader evidence base, which includes not only empirical quantitative studies but also qualitative research studies, clinical experience, patient experience, and information from the local context/organizational culture (Rycroft-Malone et al., 2004).

The evidence-based practice model that most mirrors this author's proposed guidelines for doing evidence-based nursing practice is the Evidence-Based Practice Model for Staff Nurses (Reavey & Tavernier, 2008). In this model, the authors integrated conceptual underpinnings from the Iowa model, the Stetler model and Rosswurm and Larrabee's (1999) model. The Iowa and Stetler models were discussed in some detail in earlier paragraphs. The Rosswurm and Larrabee model's primary focus is the application of change theory in implementing evidence-based practice. The uniqueness of the Evidence-Based Practice Model for Staff Nurses is its focus on the involvement of the staff nurse throughout the process. Recognition of the expertise that the staff nurse can bring to the table is a highlight of this model. Another important component of this model is the emphasis on communication throughout the process of evidence-based nursing practice.

The process for using the Evidence-Based Practice Model for Staff Nurses mirrors the nursing process with an assessment, diagnoses (identification of the problem), planning, implementation, and evaluation components. With the addition of analysis and synthesis of evidence, and integration and maintenance of practice change, the model is complete. Active input from patients, staff nurses, and nurse researchers is a key component of its successful implementation. Communication between the staff nurses, patients, and nurse researchers is pivotal to successful implementation of this model.

Reavey and Tavernier (2008) share an example of how their model was implemented, starting with a team formation of staff nurses, unit nurse manager, clinical nurse specialist, nurse researcher, and infection control nurse. The clinical problem selected was determining the best practice for frequency of central line dressing changes in severely neutropenic patients. The current policy required daily dressing changes. However, daily dressing changes resulted in skin breakdown that increased the potential for infection. Further, the clients were dissatisfied with the frequency due to the discomfort the skin breakdown caused. The next task for the team included a literature search of available evidence. The nurse researcher and the clinical nurse specialist took the lead in this step due to the heavy workloads, inadequate time, and lack of knowledge problems voiced by the staff nurses. Based on the evidence,

the team proposed that central line dressings be changed every 7 days or as needed, except for gauze dressings, which need to be changed every 2 days. Projected outcomes were reduced costs due to fewer supplies needed and less nursing time required, along with decreased infections and skin breakdown. Implementation, done by the team, included education for all of the staff nurses, conducting a pilot study, and measuring outcomes. During the 6 months following implementation of the practice change, the bloodstream infection rate remained below the benchmark of 4 per 1,000 line days (Reavy & Tavernier, 2008).

I would like to take the argument related to evidence-based practice models I started a short while back even further at this point. If the nursing profession supports evidence-based nursing practice and expects all professional nurses (even at the bedside) to practice it, then I would suggest that the process be made as user-friendly as possible. I propose the following 10 steps that provide a systematic approach to collecting and synthesizing all of the needed forms of evidence and for creating EBNP changes to improve the quality of patient care:

1. Identifying the practice problem/issue
2. Collecting and appraising the empirical evidence
3. Collecting and appraising the nonempirical evidence
4. Summarizing across all of the evidence
5. Integrating the evidence with clinical expertise, client preferences, and values in making a proposed practice change or decision
6. Developing the proposed practice change in detail
7. Considering feasibility and organizational issues
8. Evaluating the practice change
9. Marketing the practice change
10. Strategies for successful implementation and sustainability of practice change

Detail related to each step is presented in **Table 5-1**. It is important to note at this point that evidence-based nursing practice cannot be done in isolation. Involvement from key stakeholders or champions, including representation from the target population, is mandatory for successful implementation. To prevent evidence-based nursing practice from being “cookbook” nursing, the nurse must decide how to incorporate patient preferences/values into the practice change for any particular patient (DiCenso, Cullum, & Ciliska, 1998). This might include making the decision that the practice change needs adapting to that particular patient. Further, these authors suggest that the incorporation

of clinical expertise be balanced with the risks and benefits of treatment options for each patient. Further, there is a need to take into account the patient's unique circumstances such as comorbid conditions and preferences (DiCenso, Cullum, & Ciliska, 1998). Now, let us take each of these steps and discuss in more detail.

Table 5-1 Outline of the 10 Steps for Creating EBP Changes

1. Identifying the practice problem/issue
 2. Collecting and appraising the evidence
 - a. Empirical evidence
 - (1) Clinical trials
 - (2) Nonexperimental level research
 - (3) Systematic reviews/meta-analyses
 - b. Nonempirical evidence
 - (1) Published reviews
 - (2) Published protocols/guidelines
 - c. Reading and critically analyzing empirical research for evidence
 - (1) Critiquing using the down and dirty approach
 - (a) Problem statement
 - (b) Literature review
 - (c) Theoretical or conceptual framework
 - (d) Design
 - (e) Ethical considerations
 - (f) Instruments
 - (g) Sampling
 - (h) Data collection
 - (i) Data analysis
 - (j) Findings/Application
 3. Summarizing across the evidence
 4. Integrating the evidence with clinical expertise, client preferences and values
 - a. Collecting data from clinical experts
 - b. Collecting data from the patient
 5. Developing the proposed practice change in detail
 6. Feasibility issues
 - a. Costs
 - b. Timeline
 - c. Resources
 7. Evaluating the practice change
 - a. Outcome measures
 8. Marketing the practice change
 9. Strategies for successful implementation
 10. Sustainability of practice change
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IDENTIFICATION OF THE CLINICAL PRACTICE PROBLEM

The first step is identification of the clinical practice problem or issue. Frequently, this is the hardest step because it takes much thought and effort to refine the problem statement to develop evidence-based nursing practice projects. If you remember from Chapter 1, identification of the problem is also the first action in designing a research study and can be one of the most difficult steps. For example, maybe the clinical practice problem is patient falls. Falls still constitute a very broad category that requires refinement to develop a good EBNP project. Questions to consider include:

- Do I want to focus on prevention or treatment?
- What population am I focusing on (e.g., elderly, cognitively impaired, physically handicapped)?
- What setting am I interested in (e.g., hospital, long-term care facility, home)?
- What is the current fall rate and when do most of them happen?
- Current fall prevention measures and are they being followed?
- How will I individualize the intervention or practice change (e.g., individual patient fall risk assessment on admission)?

After answering questions such as these, the problem statement in the fall scenario may be “High fall rate of elderly patients on the medical surgical floor related to lack of compliance with fall prevention measures.” As you can see, the problem statement can be written very similarly to those you have done for nursing diagnoses statements. You can even use the “as evidenced by” found within the nursing diagnoses framework. Then, your problem statement would read “High fall rate of elderly patients on the medical surgical floor related to lack of compliance with fall prevention measures as evidenced by high current fall rate, lack of documentation of fall prevention measures in the patient’s chart, and nurses stating they do not have time to implement the fall prevention protocol.”

COLLECTING AND APPRAISING THE EVIDENCE

Step 2 is collecting and appraising the evidence. Both empirical (research) and nonempirical evidence is important to support a practice change. Empirical evidence may include clinical trials, nonexperimental level research, and systematic reviews/meta-analyses. Nonempirical evidence includes published reviews and protocols/guidelines. It is important to discern actual research studies from nonresearch studies. Most nursing journals are very good about directing authors to provide headings so that consumers can find the essential components of a research article. To decide if a particular article is an actual study or not, the

first approach would be to examine the abstract. The abstract should contain the problem or purpose statement that should give you a hint about whether this is an actual study or not. Creedon (2006) did an excellent job in the first sentence of the abstract by letting the reader know not only that it was an empirical study, but what type of design was used. Creedon (2006) states: “The primary purpose of this quasi-experimental research is to observe healthcare workers’ compliance with hand-hygiene guidelines during patient care in an intensive care unit in Ireland before (pretest) and after (posttest) implementation of a multifaceted hand-hygiene program.” The abstract should also include a little about the methods used to conduct the study and study findings and conclusions. It is common in nursing research to find headings throughout the article that incorporate key elements of the research study. Typically, you will be able to find the following sections: background including theoretical framework if there is one, purpose statement (usually the last sentence preceding the methods or procedure sections), methods/procedure section (study design, recruitment and protection of participants, data collecting measures), results, and discussion. If you can find these parts, then you can comfortably assume that you have an article that is reporting original research.

Nonempirical evidence includes published literature reviews, opinion articles, and protocols/guidelines/quality improvement projects. Literature reviews are a review of published research over a particular topic area. Limitations of literature reviews include secondary source of published research, interpretation of the research by someone other than the original researcher, and they may not include all aspects of the topic/issue. Published protocols/evidence-based guidelines/quality improvement projects can provide another form of evidence to synthesize with the empirical research. Just remember, these guidelines were developed for a specific patient population and need to be viewed in that light. Thus, it is advantageous to use them as just one more piece of the evidence but realize that they may or may not translate to the patient or patient population that is your focus.

There are several ways to approach finding the evidence. Electronic databases are an excellent source for finding relevant research. Libraries at universities and many hospitals purchase subscriptions through various vendors such as Ovid, EBSCOhost, Proquest, Gale powersearch, and PubMed. Several of these include MEDLINE, a huge index of medical journal articles, and CINAHL, an index of articles in nursing and allied health journals. Librarians at local universities or at your institution can be invaluable in pointing you in the right direction. A qualified librarian can assist you in deciding what search terms and electronic databases to search to yield the best results. They can also assist you with finding other types of resources both electronically and in other formats that may contribute evidence to your EBNP project.

Sources for evidence-based nursing practice appeared in Table 1-2. There are two main types of literature sources. Primary sources are original, peer-reviewed journal articles, whereas secondary sources are the author's interpretation and comments on primary sources. Since interpretation of study findings can be somewhat subjective, it is good to use primary sources when possible. A discussion on literature searches is found in Chapter 2. As you are finding relevant literature, you will start to see categories of themes emerging. For example, let us consider the problem statement "noncompliance of healthcare workers with hand hygiene." Search terms such as "noncompliance and hand hygiene" or "healthcare workers and hand hygiene" or "noncompliance and healthcare workers and hand hygiene" will result in a list of relevant and possibly nonrelevant articles. Sort by topic/focus, such as all of the noncompliance and hand hygiene together and all hand hygiene and healthcare workers together and so on. You may also categorize by research setting or population characteristics (e.g., nurses, doctors, children, older adults).

READING AND CRITICALLY ANALYZING EMPIRICAL RESEARCH

Initially, start with the abstracts to weed out nonrelevant articles. Then, start consuming the research by first skimming the article, particularly paying attention to findings and nursing implications. The next level of reading and analyzing the research involves a more thorough examination and reading of the articles. It may take two or more times through the article before you get a good understanding of the research. Once you have a good idea of what the researchers did, then the next thing to perform is a critical analysis of the study.

To make the critiquing process easier for those who do not have a strong foundation in nursing research but are still expected to consume research and apply the evidence to their practice, I propose a 10-step method to critiquing research. These guidelines are presented in Tables 6-1 and 6-2. This critiquing process will take less than 20 minutes once you have become skilled at using these guidelines. Further detail on each step and complete critique examples are presented in Chapter 6. Those articles deemed credible to use in your evidence-based nursing practice issue will need to be analyzed as a group of studies.

SUMMARIZING ACROSS THE EVIDENCE

This step is very critical to the success of your proposed practice change. Synthesize the findings from the group of empirical research studies you deemed credible. This is done in a very similar way to what is called "content analysis."

Used in this context, content analysis involves examining the findings for recurrent themes across the studies or the majority of studies. Because all research is flawed and has its strengths and limitations, it is dangerous to base a practice change on a single study. However, if you find that multiple studies are proposing the same practice change, then you can start to feel more confident in proposing this change. Now, you need to integrate other forms of evidence collected.

INTEGRATING THE EVIDENCE WITH CLINICAL EXPERTISE AND CLIENT PREFERENCES AND VALUES

The next level of evidence that needs to be synthesized is clinical expertise and patient preferences and values. Expert interviews and current best practice guidelines are resources to assess the clinical expertise available. Experts are persons that have clinical expertise in the topic/problem area of focus. A multidisciplinary approach will ensure a thorough analysis of clinical expertise available. Consider the issue of hand washing noncompliance. Experts not only include nurses, but also infection control personnel, physicians, public health personnel and epidemiologists. To facilitate synthesis and identification of themes across expert interviews, you need to develop a slate of questions for all interviews. Sample interview questions for clients and experts are presented in **Table 5-2**. Interviews and surveys will help to assess individual and/or group client preferences. Without assessing patient needs and preferences, EBNP would just be research utilization. For groups of clients with similar attributes/problems, a survey might be an efficient tool to find out the group's preferences. Clinical expertise comes into play again by the clinician who delivers the actual patient care. It is their responsibility to tailor the EBNP protocol/practice change to the individual client they are providing care to.

DEVELOPING THE PROPOSED PRACTICE CHANGE IN DETAIL

Once all of the evidence is critically analyzed and synthesized, you should have some good ideas for what to propose as an intervention or practice change. For example, if the problem was noncompliance with hand washing by unlicensed staff, and the evidence suggested the primary cause was lack of knowledge, an educational campaign might be your primary focus. Representation by the target population in the development of the practice change is critical for buy-in and success of the change. These individuals can serve as champions for implementation and ultimate success of your project. This step is the point where decisions are made about who will receive the practice change, what will it entail, when will it happen, where will it take place, and how will it take place?

Table 5-2 Sample Interview Questions to Assess Patient Preferences and Clinical Expertise**Sample Questions for Patients/Clients**

How long have you been dealing with this problem? (You can go ahead and state specifically what the problem is)

What things have you tried to help deal with _____ (problem)? How well have they worked?

What suggestions/treatments have been used by your healthcare provider to help with this problem?

Can you give any examples of what has worked and what has not worked for you personally?

Sample Questions for Experts

Find out credentials, years of experience, and where these years have been spent.

Do not use actual names of experts; use initials or fake names.

What has been your experience with _____ (condition/problem)?

Do you have any successful case studies/scenarios that you can share related to this experience?

What do you think the current best practice is for dealing with this _____ (condition/problem)?

What do you base this answer on? (e.g., research, policies, protocols, providers, etc.)

Is this current best practice you speak of being used in your facility/organization?

If not, why do you think it is not being used? If so, how is it going? How is it being evaluated/outcomes measured?

Would you say that your organization currently uses evidence-based practice?

If not, why? If so, can you give an example especially with _____ (condition/problem)?

In the noncompliance with hand washing example, the “who” would be unlicensed staff. The “what” would be the educational campaign to increase knowledge and awareness. Based on the research findings, an outline of the educational content would be developed. Timing of delivery of the education would be the next step to plan. For example, will it be a mandatory educational session for all unlicensed personnel? Will they be paid to attend? How many times will it need to be offered so that all of the target audience can attend? How will compliance with attendance be monitored? Next would be decisions about “where” it will take place. Is there a large enough room close by to the target audience? Are there costs involved in using the location? The “how” of the practice change implementation would include the process leading up to

and throughout the actual implementation of the education. Finding representatives from the target audience to champion the cause and to stimulate interest is critical to the success of implementing any practice change. Identification of these individuals occurs early in the process. They are involved in the planning and implementation of the practice change from its inception. Decisions about who will conduct the sessions, length of sessions, availability of refreshments or door prizes, and advertisement and marketing will need to be made.

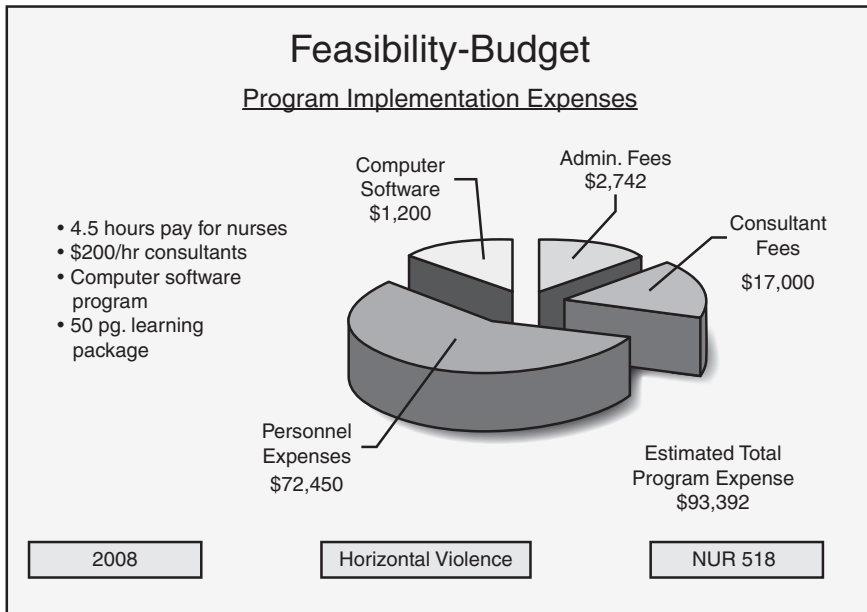
FEASIBILITY ISSUES

Feasibility issues in implementing evidence-based nursing practice changes include costs, time, and available resources. Each one of these issues is presented below with examples.

Costs/Resources Needed

Budgetary constraints are always an issue for healthcare-related organizations. One of the first things to find out from your organization is how much money they are willing to give to support the proposed practice change. Once you have a plan for the practice change, an itemized budget needs to be developed. Costs may include human resource costs (speaker's salary, target audience paid time to attend) to material resources (printing and paper costs, refreshments, door prizes, advertisement and marketing costs). See **Figure 5-3** for a sample budget. This budget was prepared for an evidence-based nursing practice project on horizontal violence.

Implementation of the proposed practice change of developing the horizontal violence program was financially feasible after taking into consideration issues relating to budget allocations. Expenses were identified for all phases of program implementation and included those for outside resources as well as in-house resources. The estimated total cost of implementing a horizontal violence program for all current nursing staff, new nurses in orientation, competency training materials, computer software, consultant fees, related administrative fees, and personnel expenses was \$92,392. This total reflects all costs associated with the first year of program implementation and includes; consultant fees over 4 days, including meals and lodging expenses, initial 4.5 hours of horizontal violence educational training for currently employed nurses, additional orientation training for new nurses in hospital orientation each month, computer software programming fees for the yearly competency training, and the administrative fees such as poster and flyer development and printing and training materials consisting of approximately one 30-minute computerized training session to assess competency in horizontal violence management. Explanation of budget is shown in **Box 5-1**.

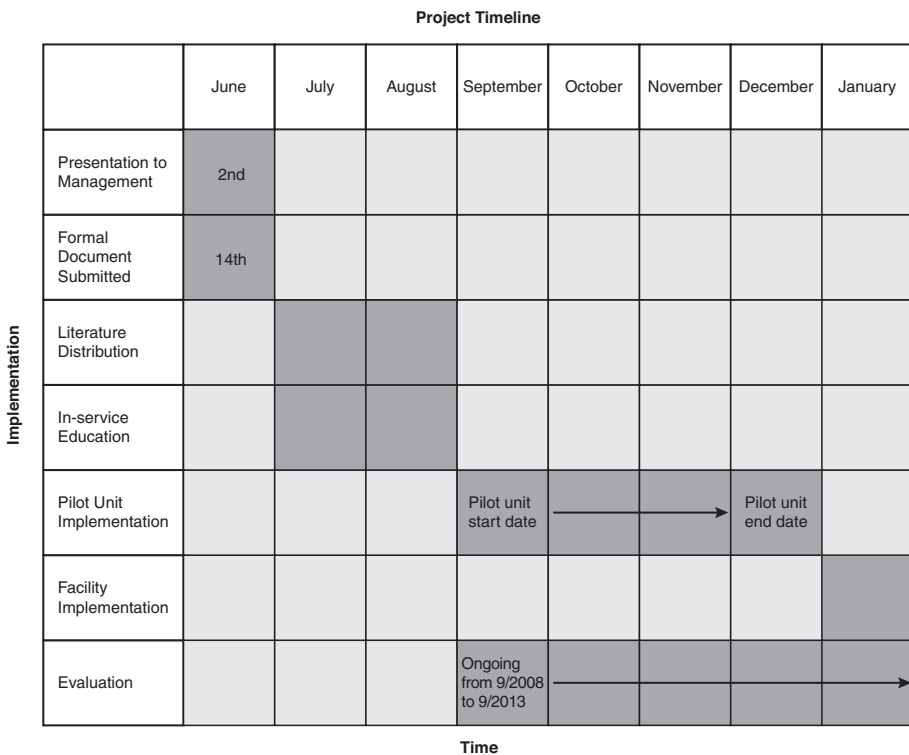
Figure 5-3 Sample budget for evidence-based practice projects.

Timeline

A timeline is very useful in ensuring progress towards implementation of the practice change. It also helps organize the details of the planning, implementation, and evaluation of the practice change. A timeline is helpful in keeping all of the players on the same page and communicating completion steps. There are many types of timelines including the Gantt chart (NetMBA Business

Box 5-1 EBNP Budget Allocation Example

- 460 nurses @ \$35/hour \times 4.5 hrs initial training = \$72,450
 - Consultants @ \$200/hour \times 40 hrs training over 4 days plus meals and lodging = \$17,000
 - 50 pg learning package @ 0.05/page \times 460 = \$1150
 - Cover of learning package @ 0.20/cover \times 460 = \$92
 - Miscellaneous supplies for educational session and hospital orientation (e.g., posters, flyers, PowerPoint presentation) = \$1,500
 - Computer software program = \$1,200
- TOTAL = \$93,392

Figure 5-4 A sample Gantt chart/timeline.

Knowledge Center, 2007). A Gantt chart is a type of chart that illustrates a project schedule. Gantt charts illustrate the start and finish dates of the primary activities leading up to completion of the project. Depending on the length of time to project completion, the chart may be broken down by days, weeks, or months. **Figure 5-4** depicts a sample Gantt chart for the hand washing example discussed earlier.

EVALUATING THE PRACTICE CHANGE

To determine the degree of success of the implemented practice change, outcome measures need to be identified. Outcomes must be specific enough so that they are measurable. For example, with the hand washing scenario, immediate outcomes could include attendance at the educational sessions and scoring 90% or better on the knowledge test after the session. Long-term outcomes could include increased rates of hand washing compliance (as compared with baseline) and a decrease in hospital-acquired infections.

MARKETING THE PRACTICE CHANGE

Getting buy-in from the target audience is crucial to the success of any new practice change. As discussed earlier, identifying champions both within the target audience and from other key players that can effect change is imperative for success. In the hand washing example, the target audience is unlicensed personnel. In this case, the evidence-based nursing practice group could include a representation from unlicensed staff, nursing, infection control, and administration.

STRATEGIES FOR SUCCESSFUL IMPLEMENTATION

Several strategies have already been discussed to facilitate a successful EBNP change. Along with having substantial evidence to support your proposed practice change, other strategies include planning, organization, buy-in from stakeholders, recruiting champions for your cause, being realistic regarding available time, money, and resources, and applying principles of change theory to effect change. One popular change theory is Rogers' Diffusion of Innovations. It is a useful framework for understanding social change. The theory deals with dissemination of an innovation (idea, practice, and product) perceived as new by an individual or group of people. It involves a five-step process (Rogers, 2003):

1. Gaining knowledge about the innovation
2. Becoming persuaded about the innovation
3. Decision step of adopting or rejecting the innovation
4. Implementation of putting the innovation to use
5. Confirmation step of reversing the decision or adopting the new innovation

Three characteristics that Rogers identified as central to the adoption decision were the potential user's perception of the benefit to practice, its compatibility with the practice setting and population, and its complexity (Rogers, 2003). Rogers argued for the importance of the user's knowledge on both the how-to and the principles behind the change or innovation. Not only do clinicians need detail about how to implement the practice change, but they also need to understand the underlying theory or framework that explains how the innovation works (Leeman, Jackson, & Sandelowski, 2006).

SUSTAINABILITY OF PRACTICE CHANGE

To sustain or modify the practice change, an evaluation plan should be developed. Identification of measures to be collected, who will be responsible for collecting and how the measures will be analyzed to document level of success

will help sustain the practice change. Booster doses (mini-doses of the intervention) over time will also facilitate sustainability of change. For example, back to the hand washing example. Measures of success included participants passing a knowledge posttest with a 90% or better and improved hand washing compliance rates. To sustain this practice, you could have participants do an online education on hand washing and retake the exam each year. Covert observations of the target group (unlicensed personnel) throughout the year on hand washing compliance would also give data to evaluate the success of the practice change. Staff would be made aware that this would be happening but would not know when it occurred in order to reduce the Hawthorn effect (responding differently because they know they are being watched).

THE BIG “SO WHAT?”

- EBNP is a problem-solving approach using current best evidence, clinical expertise, and patient values and preferences to answer a nursing practice problem.
- There are common threads across the major evidence-based practice models that include assessment and identification of the clinical problem, synthesizing the evidence, translating the evidence into a practice change, and implementation and evaluation of the practice change.
- There are 10 steps in evidence-based nursing practice.
- Evidence may include both empirical and nonempirical forms of evidence.
- A clear timeline and itemized costs are necessary for an effective evidence-based nursing practice project.
- Applying principles of planned change is critical to the successful implementation.

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