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Documenting an EBP Project: Guidelines for What to Include and Why

Priscilla Sandford Worral, PhD, RN Rona F. Levin, PhD, RN Denise Côté Arsenault, PhD, RNC

Abstract

In increasing numbers, nurses as members of intradisciplinary and transdisciplinary teams are implementing evidence-based practice (EBP) changes. These variations result in demonstrated improvement in outcomes for the patient and family, staff, organization, and community. Many of these EBP activities remain an untapped resource; however, they have potential for improving practice beyond a single facility or local area. Descriptions of EBP projects that do find their way into the literature have yet to include detail on all of the steps of the EBP process from problem identification through critical appraisal and synthesis of relevant literature to development, implementation, and evaluation of the practice change. In this article, the authors aim to provide guidance to clinicians on how to document an EBP project. Guidelines addressed in the article are also included as criteria for the Evidence-Based Practice Award, as established by the Foundation of New York State Nurses Center for Nursing Research Planning Committee.

Evidence-based practice (EBP) is being incorporated into nursing curricula at all levels and has become a popular focus of professional conferences and journals. Only 6 years after its inaugural issue, the journal *Worldviews on Evidence-Based Nursing* is now the 12th most frequently cited nursing journal in the world (Rycroft-Malone, 2009). The once-dominant themes of "what is EBP" and "why is EBP important" are evolving into a greater emphasis on "how do we do

EBP" as accrediting bodies increase their attention on use of evidence to make decisions and provide care that will improve patient outcomes.

In support and recognition of the importance of EBP implementation, the Foundation of New York State Nurses Center for Nursing Research Planning Committee (CNR-PC) established the Evidence-Based Practice Award in September 2007. The purpose of this award is to "recognize an individual or group using research-based evidence to

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make a practice change that results in demonstrated improvement in outcomes for the patient and family, staff, community, or organization" (Foundation of New York State Nurses Center for Nursing Research Planning Committee, 2008). During the 2 years since the award was announced, several individuals and groups have submitted EBP projects that they have undertaken. Many of these have demonstrated excellent potential but, to date, what has remained elusive is a direct and logical flow from practice-problem identification through each step of the EBP process to evaluation of effectiveness of the EBP change. If, for example, nurses at a healthcare institution identify a problem of increased rate of falls among their internal medicine male and female patients over 45 years of age, the outcome of interest would be a decreased fall rate among those patients. If appraisal and synthesis of relevant research demonstrates that the "4 for U" toileting protocol is the most effective intervention for decreasing falls among these patients, the "4 for U" protocol should be the practice change actually implemented. Evaluation of effectiveness of the practice change should address both the extent to which the practice change actually was implemented and extent to which the desired outcome was achieved, that is, both process and outcome evaluation.

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G	Guidelines for Documenting an EBP Project					
1.	Describe the practice problem.					
2.	Pose focused practice question (PICO format).					
3.	Describe the process for the evidence search.					
4.	Present the table of evidence.					
5.	State specific practice recommendations for implementation.					
6.	Describe determination and handling by the facility's Institutional Review Board (may be a Research Review Committee or Ethics Committee in some facilities).					
7.	Specify the method(s) for initial implementation/piloting of the practice change.					
8.	Specify methods for evaluating the practice change.					
	8a. Include description of instruments for assessing change.					
	8b. Include how such instruments will be used.					
	8c. Include when such instruments will be used.					
	8d. Include by whom such instruments will be used.					
9.	Present findings, interpretation, and recommendations based upon findings.					
10.	Describe how an effective practice change will be sustained or how clinicians will address results indicating that the change was only partially effective or ineffective.					

In this article, the authors provide guidance to clinicians on how to document an EBP project. Guidelines presented in Table I will be described and examples given. These guidelines also are included as criteria for the Evidence-Based Practice Award, previously mentioned.

Describing the problem

When creating a report on an EBP project, the project team should let readers know what it is that they set out to accomplish in broad terms. The EBP literature begins the explanation of the EBP process with the formulation of a focused clinical question as the first step. Focusing a clinical question is not easy, and as Levin and colleagues (2009) shared in a recent article: ". . . it is more difficult if we do not start with trying to understand the larger problem and its context" (p. 5). Starting with the larger problem, and using internal data to support its importance to the agency and external data to put the problem in a larger context of importance to the population in question, is where the team should begin EBP. The first step in documenting an EBP project is to describe the overall problem, how the team used both external and internal data to support the significance of that problem, and the purpose of the project. A partial example from a project proposal one of the authors is participating in developing at a New York State community hospital is presented in Figures 1 and 2.

Purpose of the Project

The purpose of the proposed project is to decrease the fall rate at XYZ Hospital by using the best available evidence to revise the current Falls Protocol.

Figure 1. The purpose statement for a EBP project includes the desired outcome and the setting.

Purpose statement

Figure 1 indicates that the purpose statement for a project includes the desired outcome (decrease in fall rate), which indirectly shows what the problem is, and the setting (community hospital and maybe specific units or areas). The nurses on this project team thought it important to include that they were going to attempt to use the best evidence in revising the protocol for assessment and prevention intervention for patients at risk for falls. The purpose directs the search for internal and external evidence. A general search needs to take place before the team is able to develop a focused clinical question as shown in the next two sections.

As stated above, the project team determines that the problem is significant by accessing internal data that more fully describe the problem in quantitative terms and place that problem within the larger context significance. Figure 2 provides an abbreviated example of what the background section of a problem description might look like. Documenting an EBP Project: Guidelines for What to Include and Why

Description of the Problem

The most recent Cochrane meta-analysis (Gillespie, Gillespie, Robertson, Lamb, Cumming, & Rowe, 2003) and a later systematic review (Oliver, Daly, Martin, & McMurdo, 2004) identify falls as a significant factor associated with morbidity in older people. Gillespie and colleagues cite several sources to support that 30% to 50% of people over the age of 65 fall each year. These authors, however, do not parcel out the rates for falls in hospitalized elderly. The review by Oliver and colleagues focuses on hospitalized patients and cites literature that indicates rates from 2.9 to 12 falls per year per 1,000 bed days (Morse, 1995) and that approximately 30% of such falls may result in injury (Rhymes & Jaeger, 1988).

At ABC Hospital the 2006 Patient Falls Statistics indicate that there were 163 falls during the year. This was an increase in our fall rate from a 2005 fall rate of .32 per 100 patient days to .39 per 100 patient days in 2006, not meeting our goal fall rate of .28 to .35 per patient days. The percentage of fall injuries, however, decreased from 42% in 2005 to 24% in 2006. The 6th and 7th floors had the highest number of falls with Behavioral Health having the third highest. The percentage of falls per shift was only slightly higher on the night shift. Also noted was that:

- 7% of patients had been identified as high fall risk.
- 17% had bed alarms in place.
- 22% had had sleep meds within 4 hours.
- 15% had footwear as a factor in the fall.

During 2005 to 2006, ABC interventions and/or factors to decrease the fall rate were put in place. These included:

- Hiring and training an increased number of nursing techs (2005 to 2006).
- Purchasing and implementing the use of bed alarms.
- Increasing the number of sitters used for high-risk fall, confused, and difficult to manage patients.

All these interventions were costly. For example, \$25,000 was budgeted in 2006 for sitters. Yet, the actual cost of sitters was \$75,000. Despite these interventions, we were still not able to reach our benchmark figure for number of falls.

Figure 2. The background section of a problem description documents internal and external evidence.

Formulate a focused clinical question

Once a general problem area is described and validated, the team can formulate a clearer question to guide a more focused evidence search and guide improvement work. This component of the model comes from the EBP paradigm and uses the PICO format described initially by Sackett, Straus, Richardson, Rosenberg, and Haynes (2000) and embellished by Melnyk and Fineout-Overholt (2005).

- P = Population of interest (includes age, gender, ethnicity, and or other relevant characteristics).
 I = Intervention or exposure to disease or prognostic factor A, or risk behavior.
- C = Comparison (may be no treatment/intervention, a placebo, no disease, prognostic factor B, or absence of risk factor).
- O = Outcome (e.g., patient state, risk of disease, accuracy of diagnosis, rate of occurrence of adverse outcome).

For example, then, frame the problem previously described regarding falls using the above format: In a population of geriatric patients, what is the effect of a toileting protocol (compared to current interventions) on the monthly and annual fall rate on the geriatric unit at XYZ Hospital?

Describe the evidence-search process

There is no one "right" way to conduct a literature search; therefore, documentation of any EBP project includes a description of the steps taken to conduct the search. Not only is this description useful for the EBP project team member who is evaluating whether any sources might have been missed or bias inadvertently introduced, the steps followed can be very helpful in the future for those interested in updating practice to assure that it remains based upon current best evidence. At a minimum, the team should include the following components in the description of the search for evidence to answer their PICO question:

- Databases searched
- Keywords used for each database
- Inclusion criteria or limitations
- Number of articles initially retrieved
- Exclusion criteria
- Number of relevant articles identified
- Number of relevant articles used
- Additional search methods

Specify databases searched

Databases most commonly included in a search for best clinical evidence include Cochrane, CINAHL (Cumulative Index of Nursing and Allied Health Literature), Medline, and PubMed. Additional databases that may be useful include PsychInfo for behavioral health practice and instrumentation, and ERIC for clinical practice related to education. Embase is another excellent database if the EBP project team includes members fluent in more than the English language. Because databases are increasing in number and each database may regularly be enhanced in capability, a reference librarian is often an essential contributor to an EBP project.

Please note that the focus of this article is how to document an EBP project, not how to conduct the project. That said, anyone undertaking an EBP change should start with a search of the Cochrane database. The Cochrane database is an excellent source of systematic reviews of multiple studies conducted to test efficacy of clinical interventions. One study alone does not provide sufficient evidence to support a practice change and a Cochrane review or other systematic review of evidence, if available, could provide a large amount of evidence quickly. For documenting an EBP project then, it is essential to include all databases searched to find evidence on the question.

Specify keywords, inclusion criteria, and exclusion criteria used

Specific keywords, phrases, and any words used to combine or truncate keywords are important to include in writing up an EBP project. Keywords have an enormous impact on whether some or all relevant articles are identified or missed during a search. The PICO question provides primary keywords that will focus a search and minimize retrieval of non-relevant evidence sources. Because databases each have unique characteristics, project documentation should note any differences between databases in keywords, phrases, subject-headings, and any word combinations used for the search.

Document both inclusion and exclusion criteria along with any differences in criteria used with different databases. These criteria exemplify the proverbial double-edged sword: They serve to eliminate articles that are not relevant or are no longer current best evidence—the positive edge—at the risk of introducing a gap or bias in evidence used to determine whether an intervention is or is not current best practice-the negative edge. Because novice literature searchers may be uncertain how inclusion and exclusion criteria differ from one another, documenting them separately helps to clarify the evidence-search process for the EBP project team itself as well as for those evaluating the project at a later date. A note of caution: Avoid using full text as an inclusion criterion, as it will inadvertently bias the search in favor of only journals to which a particular institution is subscribed. Table 2 provides an example of a literature search conducted for the PICO question, "Does the use of sucrose solutions on a pacifier compared to alternative non-pharmacologic pain management techniques prior to a painful procedure decrease the pain experienced by neonates and infants?"

Additional search methods

Literature searches generally begin with use of keywords and phrases, but may include other methods such as a search by the last name of an author known to be an active researcher in the field. Documentation of the evidence search includes every aspect of the search, including any search for unpublished evidence. An example of unpublished evidence would be results of research that are available directly from the study's principal investigator. A note of caution: One published study does not constitute sufficient evidence for a practice change. This is as true for a single randomized control trial—a stronger, higher level of evidence—as for a single case study-a lower, weak level of evidence. But what if no other evidence can be found even after an exhaustive literature search? Use of unpublished results from other rigorously conducted studies is one answer. Proceed with care if the practice change proposed is based primarily on unpublished study findings. Remember to include a description of the EBP project team's interactions with the facility Institutional Review Board (IRB) or research review committee if a practice change is based primarily on unpublished external evidence.

Extraction, appraisal, and synthesis of evidence

As stated above in the search strategy section of this paper, an EBP project should include a comprehensive review of the research evidence on the chosen topic. The volume of evidence can sometimes be cumbersome. A literature matrix, or table of evidence (TOE), is one method of indexing each relevant source in one manageable file.

Data extraction: Table of evidence

Once the search for relevant evidence is completed and the project team has determined the literature to be reviewed, each article needs to be reviewed and summarized. The conduct of such a comprehensive evidence review requires organization. Use of a TOE to streamline and organize the literature is very helpful. The TOE is made up of rows and columns; the rows contain documents such as journal articles, the columns are for distinct categories of information to be noted in all documents, such as research design and inclusion criteria. When utilized, a TOE provides a neat, clear summary of each document reviewed. The order of documents can be alphabetical or chronological, depending on which suits the purpose.

Database	Keywords/phrases	Inclusion criteria	Number of citations retrieved	Exclusion criteria	Number of citations used
Medline	sucrose AND pain AND peds	2004 — 2009, humans, English	17 Outcome ev	Level of evidence below III	8
CINAHL	sucrose AND pain AND pediatric	2004-2009, peer- reviewed research study, English, infants 1-23 months	8	Level of evidence below III, duplicate of article already retrieved	3

The sample TOE in Table 3 uses headings that provide the following guidance for documenting the evidence used in an EBP project.

- Study citation
- Sample characteristics
- Design; patient selection
- Intervention
- Findings and conclusions
- Level and quality rating
- Reviewer's comments; strengths and weaknesses

Synthesis of evidence

Once the evidence, which includes research findings, expert opinion, and information related to the values and preferences of the population in question, is gathered, it needs to be combined in a critical way. This requires moving from each individual piece of evidence to getting the full picture of what all the evidence shows. This process is called a synthesis of the evidence. The result of this synthesis or critical combination of the evidence should answer the questions: "So, what picture does all of this evidence paint?" and "What direction does the evidence give us for improving the specific practice in question?"

Using the TOE, which contains the research evidence, the project team should look at each aspect of each study and the comments about each study, and begin to put the most relevant pieces of evidence into a narrative format. Particular attention should be paid to the levels of evidence (LOEs) and quality ratings that have been given to each study, and the reasons for assigning these ratings. Since the team has already critically reviewed each of the studies in order to determine this information, it can begin in the narrative to discuss the strengths and limitations of the evidence base. One example of a strength might be that all the studies reviewed included samples similar to the population on which the clinical question was based. In other words, the samples match; they are all hospitalized adults. The team might write this as follows: "As can be seen from Table X, all the studies reviewed included samples similar to the population in our clinical question." An example of a limitation might be that although the evidence is very supportive of the practice change you are considering in a community setting, all the studies were conducted on inpatient units. (Tip: In most cases it is unwise to use evidence from one population to infer to another; try to match study populations to the population in the PICO question.).

Another example of how to write a synthesis statement about the research methods or designs used in the evidence base follows:

Most of the evidence reviewed [cite the studies being referred to here] used a pre-test/post-test evaluation design. Since we are trying to determine the effectiveness of XYZ intervention, this is weak evidence. Therefore, we needed to conduct several small tests of change to determine whether or not this intervention would work in our setting. On the other hand if all of the studies are randomized clinical trials, the team can treat methods, and therefore the evidence, as essentially strong and move on to findings.

A final example relates to the results of the studies or the findings, which are the actual evidence. All of this evidence must be pulled together now. Are the findings of each study similar or dissimilar? Consistency of findings implies good, solid consensus on the new assessment tool or treatment. Most often, however, the findings are not so clear and the project team needs to specify which findings—or evidence—are strong and which findings are weak. If the evidence for proposed practice improvement change is strong, then the team can base their recommendations for practice improvement in their agency on the existing evidence. On the other hand, if the evidence accumulated is weak, the recommendation may be to first conduct a pilot study in the team's setting.

Now it is time for the team to write a statement or two regarding the overall impression of the evidence reviewed and conclusions. Return to the statement and spell out what the evidence provides, and how it led to the project. For example: "Because of this evidence, it became clear that our protocol was inadequate. Revision based on the evidence was needed."

The outcome of the evidence synthesis should be a practice recommendation that is detailed about the above topics: who, what, when, where, how. Figure 3 provides an example of a practice recommendation based on a synthesis of evidence.

Specify methods for implementation/ piloting of the practice change

Documentation of the method(s) for implementation of the practice change should demonstrate for the reader how the practice recommendations developed from the synthesis of the evidence actually will be carried out in the practice setting. Implementation is where the science is translated into practice.

Describe the protocol for the practice change

The description of the protocol for the practice change documents the steps taken to implement practice recommendations developed from synthesis of external evidence. The focus here is on assuring that the practice change remains consistent with the evidence upon which it was based. The EBP team should document in some detail and whenever possible their use of the same materials, activities, and timeframes as were used in the original research. For example, synthesis of the evidence might show that education programs intended to decrease high-risk sexual practices among young adult women are most effective if they include hands-on skill training, are taught in small groups, and are facilitated by women of the same age and ethnicity as participants.

Table 3 Example o	f a table of evid	ence (TOE)	model comes . In	BE Orolect, and hose	to conduct the	ad doing and search of the said. and the said and search of the search o
Study citation (authors and date)	Sample (characteristics and size) and setting	Design/ patient selection	Intervention	Findings/ author conclusions	Level/ quality rating	Reviewer's comments (strengths and limitations)

Sample Practice Recommendation

This recommendation is based on an EBP project that sought to find the most sensitive and specific instrument to assess risk for falls in an adult population in an acute care setting.

Based on a review of current research evidence, the Falls EBP Project Team recommends the following:

- 1. ABC should change the tool used to assess risk for falls to the STRATIFY tool (Coker & Oliver, 2003). The rationale for this change is twofold. First, the current instrument, the Morse tool (Morse, 1989), does not include toileting as a risk factor for falling. The best evidence to date supports toileting as a significant risk factor (Lyons, 2004). Second, the STRATIFY tool has good sensitivity and is easy for nurses to use (see description of tool which would be included in your documentation).
- 2. The STRATIFY tool should be used with every patient admission to assess the risk for falling. This would take the place of the separate safety assessment currently conducted by the admission assessment unit (AAU).

Figure 3. The practice recommendation should be based on a synthesis of evidence.

Documentation of the protocol for practice change would specify these same factors. Implementation under conditions that vary from that of the research could yield very different outcomes. As will be noted later in this article, evaluation of the process for implementing an evidence-based change is as important as implementing the process itself. Conducting the process evaluation will be much easier if the implementation protocol is clearly delineated.

Describe IRB involvement

As policy makers, consumers, and healthcare professionals themselves push to increase the speed with which research is translated into practice, an EBP team may find itself attempting to implement a practice change based on limited or weak evidence. As noted earlier, one study in the literature does not provide sufficient evidence to support the claim that a practice change is evidencebased. When neither adequate published nor unpublished study findings exist, the EBP team should carefully consider whether their obligation to provide safe patient care dictates conducting a study to generate evidence rather than attempting to use evidence that is weak or non-existent.

The best rule of thumb for an EBP team to adopt is: "When in doubt about whether to involve the IRB, ask the IRB." Standing IRBs have specific federal guidelines they follow to determine whether a practice change protocol falls within their purview for review and approval. These guidelines are primarily focused on protecting the rights of human subjects of research. As patient advocates, nurses are obligated to put patient safety first whenever practice change is considered.

Describe the method(s) for implementing the protocol

Once the practice-change protocol has been written, the next step is to describe how that protocol will be implemented in the particular practice setting. Examples of what the EBP team would include in documenting their implementation methods are how and when affected staff were introduced to and educated about the practice change, how any other unit activities were altered, what new forms were used, and how all staff and other stakeholders were kept up-to-date on whether the practice change was achieving its desired outcome.

Conducting a pilot or trial run of the practice change prior to full implementation is almost always beneficial as a way to learn on a small scale what environmental and organizational obstacles need to be overcome or mitigated, or whether the evidence-based change is either not feasible in the setting or not appropriate for the patient population. If the EBP project is one describing full implementation of an evidence-based change rather than a pilot of that change, the EBP report should include justification in support of the decision not to conduct the pilot.

Identification of a specific EBP model as the underlying framework guiding both implementation and evaluation of the practice change is not currently required for the Foundation's Evidence-Based Practice Award. At times, an EBP team might find use of an EBP model to their advantage. Several models exist and some may be a better fit than others for a particular project focus or a particular setting. One advantage to using an EBP model that is common to some degree among all of those listed below is their attention to the context within which EBP takes place as well as attention to EBP itself. Authors of this article have used the following frameworks to guide EBP implementation and evaluation in their settings:

- Advancing Research and Clinical Practice Through Close Collaboration (ARCC) (Melnyk & Fineout-Overholt, 2005)
- Disciplined Clinical Inquiry (Sanares & Heliker, 2002)
- Evidence-Based Practice Improvement (EBPI) model (Levin et al., 2009)
- Iowa model (Titler, et al., 2001)
- Promoting Action on Research Implementation in Health
- Services (PARIHS) (Rycroft-Malone, 2004)
- Rosswurm and Larrabee model (1999)

Other models and frameworks exist; all provide methods for bringing evidence to the point of care in a systematic, conscientious, and measurable manner that, if evaluation of implementation is found successful, lay the groundwork for sustainability.

Describe methods for process and outcome evaluation

Documentation of evaluation of the EBP change provides the reader with the answer to the PICO question originally posed and information about how that answer was determined. EBP project evaluation also includes descriptions of methods for conducting the evaluation and instruments or processes used to collect evaluative data. One of the most important points to be made in the report is whether and to what extent the proposed practice change actually resulted in the outcome desired. In other words, the process must be clearly linked to the outcome. The third crucial link to be made is to context, or the setting in which the practice change is being made. Including both process evaluation and outcome evaluation will enable the reader to link process to outcome within a specific context.

Methods for evaluating the practice change

Evaluative data primarily answer two basic questions: 1) How well did it work? 2) How well did it work in my setting? Documentation of the evaluation, then, must include attention to how the method for evaluation was both consistent with the evidence base supporting the change and feasible in the setting in which the change was

being piloted. This description should flow seamlessly from documentation of the method for implementing the change. The obvious answer to assuring that the evaluation method is consistent with the evidence base is to replicate the steps of the research conducted to generate the original evidence. This level of rigor is especially appropriate for any practice change based on only two or a few studies, or in the case of a practice change that poses more than minimal risk to patients. A design more frequently used for evaluation of practice change is to try the change with one group measuring the outcome of interest both before and after implementing the change. Because this design only provides weak evidence in support of a

practice change, the past several years have seen an increased interest in what the quality improvement world calls *rapid cycle change*, in which a series of increasingly larger groups of individuals participate in the practice change. If outcomes remain positive and the process for implementation remains feasible and cost-effective, the practice change will be implemented agency- or institution-wide.

Include description of instruments/processes for assessing the change

Answering the question "How well did it work?" requires that the desired outcome be measurable. Specific information to be documented in an EBP project report includes the instrument or process used, how that instrument/process was used, by whom it was used, and the timeframe of use. The report should have sufficient detail for the reader to be able to replicate use of the instrument or process. For example, a nurse EBP team implementing an evidence-based hydrogel dressing protocol to increase the rate of wound healing among adults with open, uninfected surgical wounds, might measurably define the outcome of increased rate of wound healing as:

... a 15% or greater decrease in the number of days for a patient with a hydrogel dressing to demonstrate a 20% reduction of wound volume calculated as cm³/day based on wound measurements done at the same time every day by one of two trained wound team nurses. Length X width X depth will be measured with a disposable 50 cm paper ruler and a sterile cotton-tipped applicator. The definition of length is the longest axis of the wound. Width is the longest axis perpendicular to length, and depth is measured from the deepest point in the wound up to skin level using the applicator.

In this example, the question still to be answered is "a 15% decrease compared with what?" The EBP team documenting the evaluation of this practice change would include both the answer to the question and a statement of how data used for comparison are readily available in their practice setting.

Answering the question "How well did it work in my setting?" requires that the EBP team draft a detailed protocol for how the practice change will be implemented. In other words, the process

The report should have sufficient detail for the reader to be able to replicate use of the instrument or process. for implementing the change must be as clearly measurable as the outcome the change is supposed to effect. Identification of stakeholders, methods for gaining stakeholder buy-in, methods and timelines for training staff, and detail about which clinical policies need to be revised or added are all important aspects of the implementation protocol. Not only is a clear and setting-appropriate protocol helpful for decreasing resistance to change during initial implementation, it is equally helpful to the EBP team in determining how to sustain the change if successful or why the change might not have worked in their setting if unsuccessful.

Documentation of the instrument(s) and/or process(es) used to collect data for evaluation also should include the rationale for why the EBP team chose particular instruments/processes for their practice setting and patient population, and how reliability and validity of the tools or processes were assessed. An evidence base strong enough to justify practice change should include information about reliability and validity of instruments used with patients similar to those in the EBP team's setting. If the evidence base does not include this information, documentation of a complete yet concise description of how the team determined appropriateness of the instruments/processes for their patients and setting, and how the team assessed reliability and validity of those instruments/ processes is even more important.

Present findings, interpretation, and recommendations

Findings, interpretation of findings, and recommendations for practice based upon findings obviously are related to one another, but they are not synonymous with one another. Documentation of findings should include both data in tabular or graphic format and a narrative discussion of those data free of opinion or judgment. Interpretation of findings provides the EBP team the opportunity to draw conclusions based upon results of their pilot of the practice change. Answers to the questions of whether and to what extent implementation of the practice change resulted in the desired outcome in the specific practice setting must be stated clearly and definitively, leaving no confusion on the part of the reader. If the pilot of the change was successful, recommendations for practice should address how the change was expanded to other units or appropriate areas of the institution or organization, as well as plans for sustaining the change over the long term.

Describe methods for sustaining successful practice change

This section of the EBP project report includes documentation of how organizational processes such as clinical and administrative policies and procedures were modified to incorporate the change. Examples might be inclusion of an evidence-based falls prevention decision tree in the hospital clinical policy manual and addition of falls prevention training to the list of annual required staff education programs found in the administrative policy manual. The EBP team also would address whether the methods used to collect evaluative data would be made permanent and, if so, how those methods would be incorporated into routine operations of the organization. Documentation of resource requirements and how those resources will be obtained also should be addressed.

Conclusion

The authors' aim with this article was to provide guidance on how to document an EBP project. Writing up an EBP project is no easy task, but neither is it insurmountable, and professional nurses are certainly up to the challenge. In fact, if you start documenting an EBP project at the same time as you are collecting internal and external evidence to describe the problem both within your facility or agency and within a broader healthcare context, you may discover that writing up the EBP project while you are conducting it will actually make the project itself move ahead more smoothly.

Content that must be included in a complete EBP project report is addressed in this article, but this list is by no means exhaustive. For example, several designs and methods for conducting evaluations are described in the literature. The importance of addressing the natural human resistance to change was only briefly mentioned, but may take center stage in an EBP project that requires a major shift in daily routines for practice change to be implemented.

Basing patient care decisions on current best evidence, patient preferences, and clinical expertise is our professional obligation to the patients and communities we serve. Documenting the EBP process so that we can share lessons learned and outcomes achieved with our healthcare colleagues is arguably an equally important obligation.

REFERENCES

- Foundation of New York State Nurses Center for Nursing Research Planning Committee (2008). Foundation of the New York State Nurses Central New York Nurses Center for Nursing Research Strategic Plan. Goal 3b. Recognize excellence in implementation of nursing research into practice. Unpublished draft document.
- Levin, R. F., Keefer, J. M., Marren, J., Vetter, M., Lauder, B., & Sobolewski, S. (2009) Evidence-based practice improvement: Merging 2 paradigms. *Journal of Nursing Care Quality*. Advance online publication. doi: 10.1097/NCQ.0b013e3181b5f19f.
- Melnyk, B. M., & Fineout-Overholt, E. (2005). Evidence-based practice in nursing & healthcare: A guide to best practice. Philadelphia: Lippincott Williams & Wilkins.
- Rosswurm, M. A., & Larrabee, J. (1999). A model for change to evidence-based practice. Image— The Journal of Nursing Scholarship, 31(4), 317-322.
- Rycroft-Malone, J. (2009). Looking "back to the future." Worldviews on Evidence-Based Nursing 6(1), 1-2.

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- Rycroft-Malone, J. (2004). The PARIHS framework—A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality*, 19(4), 297-304.
- Sackett, D. L., Strauss, S. E., Richardson, W. S., Rosenberg, W. M. C., & Haynes, R. B. (2000). Evidence-based medicine: How to practice and teach EBM (2nd ed.). New York: Churchill Livingstone.
- Sanares, D., & Heliker, D. (2002). Implementation of an evidence-based nursing practice model: Disciplined clinical inquiry. *Journal for Nurses in Staff Development*, 18(5), 233-238.
- Titler, M. G., Kleiber, C., Steelman, V. J., Rakel, B. A., Budreau, G., Everett, C. L. Q., et al. (2001). The Iowa model of evidence-based practice to promote quality care. *Critical Care Nursing Clinics of North America*, 13(4), 497-509.

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