Addition of a Decision Point in Evidence-Based Practice Process Steps to Distinguish EBP, Research and Quality Improvement Methodologies

JoAnn Mick, RN, PhD, MBA, AOCN, NEA-BC

This column shares the best evidence-based strategies and innovative ideas on how to facilitate the learning of EBP principles and processes by clinicians as well as nursing and interprofessional students. Guidelines for submission are available at http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1741--6787

INTRODUCTION

Although a variety of articles are available with strategies to help students and nurses differentiate between evidence-based practice (EBP), quality improvement (QI), and research, nurse educators often face challenges when assisting nursing students or staff to distinguish these methodologies for use in actual practice (Ogrinc, Nelson, Adams, & O’Hara, 2013; Reinhardt & Ray, 2003; Shirey et al., 2011).

AIM

The aim of this educational intervention was to provide a visual picture of EBP, QI, and research as separate but interlinked processes to help nurses distinguish the three methodologies.

Intervention

An EBP Process Model (see Figure 1) for initiating clinical inquiry as an EBP project, following Sackett’s (1996) five-step process (ask, gather, appraise, act, and evaluate) and Melnyk, Fineout-Overholt, Stillwell, and Williamson’s (2010) addition of Step 6 (dissemination) was developed with the addition of a decision-point at Step 4 (act). The decision at Step 4 is related to choosing QI or research methodology to conduct a project. The EBP Process Model was used as an educational strategy in an EBP program offered within a large healthcare system in southwestern United States.

The approach aimed to support nurses to learn the EBP process by allowing a clinical question to lead the search for evidence (Steps 1 & 2); for evidence appraisal to lead to the most appropriate action when choosing a methodology to ensure best practice recommendations are successfully incorporated in nurses’ current practices (Steps 3 & 4); for evaluation to determine if desired outcomes were achieved (Step 5); and to advocate the importance of sharing project results (Step 6). A decision for action in Step 4 of the EBP process addresses the choice of QI or research methodology to test interventions or verify outcomes of strategies identified in the literature review for implementation in the practice setting.

Another way the EBP Process Model (see Figure 1) has been used is in educational sessions for new graduate nurses. Specifically, it has been used for new nurses transitioning into practice as well as with experienced nurses learning about EBP in a hospital setting. For example, after following Steps 1 through 3 of the EBP process and identifying best practice recommendations, Step 4 supported the integration of evidence into practice, considering clinical expertise and patient preferences and values. Nurses in the EBP program compared current practices in their settings with the best practice recommendations or strategies identified in their literature review.

At this point, either current practice was confirmed as meeting best practice standards or the need for a change in practice was identified.

Often, during the appraisal of evidence, a new intervention or strategy was discovered that could be added to current practice. In planning for implementation of these new interventions, a decision regarding the best methodology to use became relevant. For EBP projects that warranted changes, nurses were encouraged to consider if they should use QI or research methodology to implement or test the intervention.

The choice of research methodology was considered appropriate when article appraisal had yielded a study that could be replicated in the nurse’s practice setting, especially when the
Addition of a Decision Point in EBP Process Steps to Distinguish EBP, Research and QI Methodologies

Figure 1. EBP Process Model

The author had identified the need for additional research. After obtaining permission to replicate the study, the author’s research question could be adapted for protocol development. The nurse could follow the researcher’s study design by using the inclusion and exclusion criteria, study instrument, and data collection and analysis plan. Study results from the nurses’ practice setting could be compared with information in the published article. Other options for using research

Table 1. Process Model Evaluation

<table>
<thead>
<tr>
<th>Question:</th>
<th>The EBP Process Model</th>
<th>Percentage agree/strongly agree</th>
<th>Percentage disagree/strongly disagree</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>... supports discussions about conducting clinical question development and literature search/appraisal before identifying a project as QI or research.</td>
<td>90.7</td>
<td>7.8</td>
<td>4.17</td>
<td>0.969</td>
<td></td>
</tr>
<tr>
<td>... allows the EBP Process to be viewed as an overarching process for initiating a project.</td>
<td>93.9</td>
<td>4.6</td>
<td>4.34</td>
<td>0.895</td>
<td></td>
</tr>
<tr>
<td>... shows QI and research as separate processes for testing or evaluating outcomes of implementation of identified best practices.</td>
<td>87.7</td>
<td>7.7</td>
<td>4.17</td>
<td>0.985</td>
<td></td>
</tr>
<tr>
<td>... shows how a strong project framework can be established by beginning with development of a strong clinical question.</td>
<td>92.3</td>
<td>4.6</td>
<td>4.25</td>
<td>0.891</td>
<td></td>
</tr>
<tr>
<td>... supports that a review of literature is conducted before expending project effort to be sure the most appropriate evidence is being considered and implemented.</td>
<td>87.7</td>
<td>4.6</td>
<td>4.27</td>
<td>0.926</td>
<td></td>
</tr>
<tr>
<td>... supports that a project conducted in EBP Process Steps 1-3 is transferable to QI steps of Plan, Do, Check, Act as well as research methodology in development of background information, research question, and proposed research plan for study conduct.</td>
<td>89.3</td>
<td>4.6</td>
<td>4.27</td>
<td>0.877</td>
<td></td>
</tr>
</tbody>
</table>
methodology could be to test an intervention that would be implemented by using a control and treatment group or using other appropriate study designs to answer research questions.

The choice of QI methodology was considered appropriate for evaluating results of implemented interventions. Baseline data were to be collected prior to implementing the best practice recommendation (e.g., via policy change, guideline development, education, or other change strategies) and then postintervention data would be collected to verify improvement in nursing practice or patient outcomes.

**Program Evaluation**

Program participants during a 2-month timeframe ($n = 75$) were offered an opportunity to provide feedback regarding the EBP Process Model for eight statements, using a self-report scale format to indicate their level of agreement from $1 = \text{strongly disagree}$ to $5 = \text{strongly agree}$.

**Findings**

Sixty-four nurses (85%) responded to the invitation. The majority of respondents indicated they agreed (47.6%) or strongly agreed (44.4%) that the EBP Process Model provided a visual picture of EBP, QI, and research as separate processes ($M = 4.29$, $SD = 0.869$). Nurses agreed (44.6%) or strongly agreed (43.1%) that the EBP Process Model helped them distinguish between EBP, QI, and research ($M = 4.22$, $SD = 0.967$). See Table 1 for additional information provided by program participants.

**IMPLICATIONS FOR PRACTICE**

Use of the model supported the EBP approach to be taught as an overarching process for initiating a project. QI and research should be viewed as separate processes (methodologies) for testing or evaluating outcomes of implementation of identified best practices. The EBP Process Model supported that a strong project framework can be established beginning with development of a strong clinical question. A review of literature should be conducted prior to expending effort to be sure the most appropriate actions are being considered and implemented. All project work conducted in EBP Process Model Steps 1–3 is transferable to the QI steps of plan, do, check, and act, as well as to research methodology in development of background information, research question, and the proposed plan for research conduct. The EBP Process Model can provide a useful strategy for educators when teaching nurses or students to differentiate between EBP, QI, and research.

**References**


