Evidence-Based Decision-Making for Nurse Leaders

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Coronavirus 2019 (COVID-19) is challenging nurse leaders to adopt new decision-making practices. Nurse leaders who support evidence-based nursing practice create a culture of inquiry and lay the foundation for the use of evidence to inform management decisions. This article uses a case study to describe the evidence-based management process. The authors provide strategies for nurse leaders to develop evidence-based management competencies and build a culture to support the use of evidence to inform decision-making in leadership and management.

Another executive planning meeting, but this time, the executive team in a hospital in the Midwest is looking to develop plans to address the increased costs incurred from the influx of COVID-19 patients. Operational revenues are far outpaced by the expenses incurred for the second consecutive quarter. Nurse retention has become problematic due to furloughs incurred in ambulatory and specialty care areas because they are no longer seeing their usual patient volumes. Inpatients are requiring critical care services, and the cost for agency staffing to supplement the organization's critical care nursing staff is contributing to the operational loss. The chief nursing officer (CNO) of this hospital needs to develop a plan for the last quarters of the fiscal year to address the current and projected staffing resources needed to ensure safe, patient care. She also needs to include strategies that will support staff recruitment and retention despite fluctuating volumes, as well as plan for a potential surge of coronavirus 2019 (COVID-19) patients. Does she attempt to explore strategies to safely redeploy her own staff to manage unpredictable caseloads rather than continuing to access temporary staff, or seek out best practices to guide her decision-making? What strategies are needed to ensure competency of deployed staff? What are the best approaches to support staff during this challenging period of change?

Like so many of her executive colleagues, this CNO is facing challenges requiring different and alternative ways for resource planning. The current health care system requires strategies for decision-making in an uncertain and unpredictable future. Failures in strategic decision-making often result from a leader's "failure to anticipate a reality different than what is prepared or willing to see."[1] In this case, this CNO recognizes the dilemma arising from recent events and needs to plan for moving forward toward whatever may be construed as a "new normal," an environment unlike the familiar. Until this point in time, the CNO has been relying on whatever information she receives through organizational sources to see that her patients received safe care. Now it is time to look past the initial curve and plan for that next phase. One approach to the problem is to apply an evidence-based management (EBM) approach to make the decisions necessary for an uncertain future.

EVIDENCE-BASED MANAGEMENT DECISION-MAKING

EBM is a growing practice among business leaders and is much more nascent among nurse leaders. Evidence-based management has its foundation in evidence-based nursing practice (EBNP), which has evolved to reflect the use of the best scientific evidence in combination with the nurse's professional

> **KEY POINTS**
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> • **Nurse leaders must build on their knowledge of evidence-based practice to cultivate a broader use of evidence in their management decision-making.**
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> • **There are a variety of strategies that can be accessed to support nurse leaders in reinforcing their competence in accessing, appraising, and applying evidence to their management decision-making.**
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> • **By creating a culture of inquiry that utilizes the best available evidence, nurse leaders can participate in delivering successful outcomes that support the practice environment, organizational success, and health care outcomes.**

judgment and the patient's preferences.[2] Like EBNP, EBM decision-making is the systematic application of the best available scientific evidence in combination with organizational evidence, leaders' professional experience, and stakeholder evidence to decision-making.[3] Nurse leaders have been cited as 1 of the prevailing determinants in the adoption of EBNP. Nurse leaders who set a vision and create a culture to support EBNP are more successful in realizing the goal of quality patient outcomes.[4,5] Leaders who do not understand EBNP are less likely to cultivate a broader culture of using evidence informed management decision-making. The Center for Evidence-Based Management[6] offers a 6-step process to guide EBM decision-making (*Figure 1*).

1. The *asking* step is when a question is developed—often in response to an organizational problem. The question is then used to guide a search of evidence. As noted, evidence is acquired from multiple sources. Scientific evidence is the external evidence gathered from a search of the published literature. Organizational evidence may include performance improvement results, quality outcomes, and financial metrics. Stakeholder evidence includes the perspectives of those who will be impacted by the decision. Examples may include employees or patients and families. And last, the leader's professional experience can be factored into the decision process as well. This is the most variable in terms of reliability depending on depth of the leader's past experiences.

   In this case, the CNO has begun her planning with these questions:

   With an operational loss in the organization in the first 2 quarters,
   a. *Is there an effective means of redeploying staff safely across services while ensuring maintenance of competency to reduce cost?*
   b. *What other options exist to maintain adequate staffing to manage surge situations?*
   c. *What are the best practices seen to support and retain staff during this difficult time of complex system change?*

2. The *acquiring* phase is the time to gather evidence. A systematic search of the literature begins by identifying search terms and search engines. This stage can be facilitated by a librarian, if available. Organizational data are often routinely provided by the quality and finance departments. Stakeholder evidence can be gathered from employee surveys or patient feedback surveys (*Figure 2*).
   In this case study, the CNO will begin by systematically gathering whatever internal organizational data are available. Despite the difficulties of the last months, she can evaluate patient outcomes in departments in which redeployments have

occurred. *She can collaborate with human resources to obtain staff input regarding needs for additional training and concerns for personal safety. Patient and family feedback may be available for review as well as input from other members of the professional health care team. These internal data will provide information to the CNO about what may have worked well and where opportunities for improvement remain. Although external evidence may be sought from literature, the CNO may find that little has been published in recent months regarding her questions. In evaluating external evidence, she knows it is preferable to seek high quality research studies.*

However, much of the current research has focused on epidemiological studies rather than the process of care, required resources, and impact on staff. Still, many sources of expert opinion based on experiences in managing disasters and the current pandemic have been made available through professional nursing organizations such the American Organization of Nurse Leaders and the American Nurses Association.

3. The *appraisal* process requires an analysis of the strength of the evidence. The quality of the published research, organizational data, and stakeholder preferences can all be evaluated using a grading system. Published research is generally considered stronger evidence because most often the evidence has been through a review process. Academic publications use a peer-review process and business publications use an editorial board review process. Leaders should carefully evaluate the journal source. There are many predatory journals publishing articles that have not been through a review process and may be of questionable quality. Although organizational and stakeholder data are not published, they can be considered of sufficient quality to inform organizational decision-making if they are collected using unbiased methods.
   In this case, the CNO evaluates the quality of the internal and external evidence. Although not always the strongest evidence, webinars provided by professional organizations delivered by experienced nurse executives may very well constitute the "best available evidence" to inform the problem. The quality of the internal stakeholder data is also evaluated to provide direction to the CNO.

4. Once satisfied that she has sufficient evidence, the CNO will move to the *aggregating* step. In this step, the evidence from the various sources are synthesized to identify contributing factors to the problem and relevant options for resolving the problem.

5. The *applying* step includes an analysis of the various options identified through the review of the evidence. The CNO might consider using a decision matrix to evaluate each option against a few key criteria. The criteria may include the strength of the evidence, fit with the organization, financial resources, feasibility, cost, and effectiveness or impact.
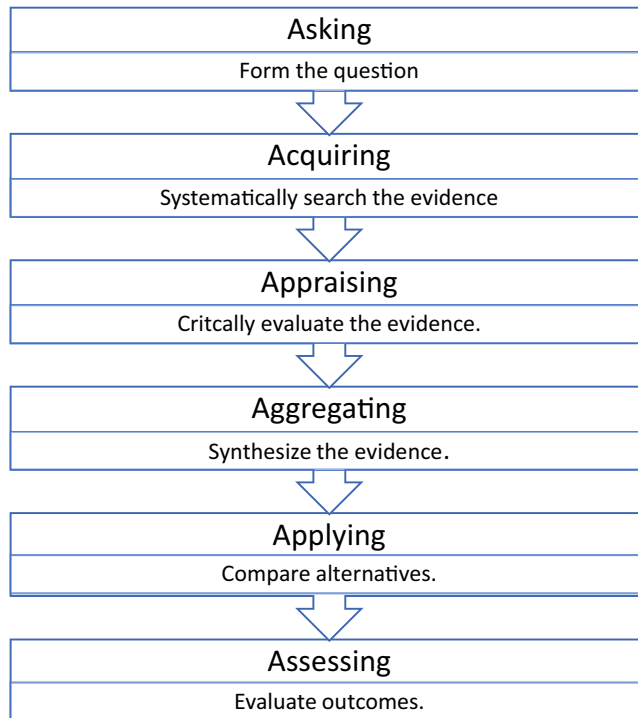
Figure 1. EBM Decision-Making Process.

6. *Assessing* is the final phase of the process. This is the opportunity to evaluate the effectiveness of the selected decision once implemented. Evaluation should include formative, process measures and summative, outcomes measures.

The CNO should determine indicators of success for the selected plan. The initial stakeholder data may also serve as evaluation criteria throughout the implementation phase. In addition to evaluating the implementation process and outcomes of the decision, the CNO may want to identify measures to monitor for potential unintended consequences of a practice change. For example, staff dissatisfaction and stress may be possible unintended consequences of the decision and should be monitored. Evaluation is clearly a critical step that needs to be planned as carefully as the implementation of the decision.

DEVELOPING EVIDENCE-BASED MANAGEMENT COMPETENCIES

Although EBM may be perceived to be a relatively new process for nurse leaders, it shares its roots with EBNP. In a national assessment of EBNP in the United States,
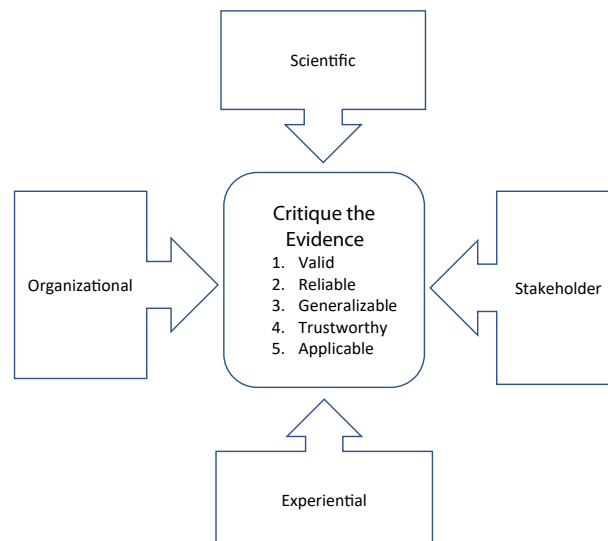

Figure 2. Sources and Evaluation of Evidence.

identified deficiency in EBNP competencies as the third most common barrier to establishing a culture supporting EBNP.[7] Furthermore, many nurse leaders and clinical nurse educators do not have a strong foundation in the competencies necessary to support EBNP.[4] It stands to reason that a lack of competence in EBNP would also indicate a weak foundation for EBM. A nurse leader competent in EBNP, will challenge traditional nursing practices by asking, "what is the best available evidence?" The same competencies required for EBNP apply to EBM: the ability to question practice then search, appraise, and apply evidence acquired through education and experience in leadership form the foundation for EBM competence.[8] The challenge often presented is in developing and maintaining the competencies needed to apply the 6-step process to inform their actions.

Developing competencies for the practice of EBM may take many approaches. For the individual nurse leader, personal development may begin with the pursuit of further formal graduate education that will increase depth of knowledge in EBNP and its application to management and leadership decision-making. Graduate nursing programs include the fundamentals of EBNP in their curricula. Nurse leaders prepared at the graduate level are needed to support staff in the delivery of transformed healthcare systems of the future.[9] Web-based continuing education modules provide another source to learn EBM competencies. In addition to the many EBNP websites, the Center for Evidence-Based Management provides training and resources specific to EBM competencies.[6]

CREATING AN ORGANIZATIONAL CULTURE OF EBM

Creating an organizational culture requires strategic planning and action. Organizational structures and processes are important steps that a leader must take to support a transition to EBM. Many of the same structures needed to support EBM are common to creating a culture supporting EBNP. First and foremost, create a climate that encourages questioning the status quo.[10,11] The EBM process begins by asking questions about current practices and identifying best approaches to solving organizational problems. Second, resources to support searching the evidence are needed.[4,10] These resources include librarians, research support staff, or partnerships with academic facilities to develop unique models such as fellowships. Health care organizations with structures in place to support knowledge development and transfer can assist leaders in clarifying questions to be asked, and acquiring, appraising and aggregating the *best* available evidence.[12]

Third, create processes to reinforce skill development. Forming or joining journal clubs that may already exist within the organization will open opportunities for practice of the application of EBM decision-making.[10] By creating a learning environment, leaders can practice evaluating evidence in a safe environment. Academic faculty are experts in understanding research literature and may be willing to assist organizational leaders in developing EBM competencies. Fourth, leaders familiar with EBM practice can develop templates or other tools to support EBM decision-making processes. To create an organizational culture requires consistent education and reinforcement over time.[10]

One last strategy for creating competence and a culture of EBM is to engage in management research.[13] Opportunities to engage in research are plentiful given the growing number of PhD and DNP programs. DNP students bring expertise in evidence-based practice and through their projects, role model the steps of EBNP and EBM to the organization.

HOW CAN EBM BE RELEVANT TO NURSE LEADERS?

Using EBM decision-making, nurse leaders may access internal data, external data, and stakeholder information in the evaluation of the nursing practice environment. Because many nurse leaders participate in the National Database of Nursing Quality indicators (NDNQI) surveys of their nurses, through a survey of these key stakeholders, nurse leaders identify strengths and opportunities for improving their work environment. By comparing the organization's performance to national benchmark organizations, priorities for growth and improvement can be incorporated into the strategic plan. Commonly, opportunities to improve the nurse practice environment are identified though evaluation of an extensive evidence base of interventions to create healthy work environments. Reviewing and evaluating evidence for its relevance to the specific organization is an important step in selecting interventions to implement. Once the evidence is appraised, a decision can be made by nurse leaders to select appropriate strategies to improve the work environment and incorporate them into the organizational strategic plan. Evaluation of the effectiveness of the selected decision, once implemented, will occur because NDNQI benchmark data continue to be gathered on an ongoing basis.

RETURN ON INVESTMENT?

Resources are costly and time-consuming, and require commitment from all leaders within the organizational hierarchy. So, why invest into the process and build an open, questioning culture? The rationale for using an EBM approach in decision-making is similar to that of EBNP. The same wide variations in practice found in clinical care are found in managerial practice.[11] Use of EBM helps to close the research-to-practice gap.[3] By using evidence to guide decision-making, leaders stand to realize greater returns on their investment. Using an

EBM approach encourages the examination of evidence from multiple sources and yields better outcomes. Lessons can be learned from the available evidence to improve the work of nurse leaders and support the decisions they make or bring to the table. The goal that evidence will guide 90% of health care decisions was set nearly 20 years ago. One of the critical barriers to realizing this goal has been the competence and support of nurse leaders. By using EBM practices, nurse leaders will create a culture of inquiry that supports the practice environment, organizational success, and health care outcomes.

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