A Successful Evidence-Based Practice Model in an Acute Care Setting

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The process and resources required to develop and maintain a strong evidence-based practice (EBP) environment in an acute care setting are described in this article.

Two years after the development of an EBP plan at a 383-bed community Magnet® hospital (redesignated in 2010), 34 projects are ongoing, 9 articles have been published in peer-reviewed journals, numerous presentations of data have occurred, and 9 studies have been funded. In addition to funded studies, presentations, and publications, changes in practice as a result of nurse-initiated projects occur on a regular basis. The success of this EBP plan can be attributed to the presence of the following five components: (a) a clear philosophical direction for nursing in the institution, (b) supportive administrative goals and actions, (c) resources dedicated to the goal of EBP, (d) communication strategies designed to facilitate EBP, and (e) clear definitions of the three evaluation processes used in acute care institutions: research, EBP projects, and quality assurance (entitled performance improvement in the authors' institution).

Philosophical Foundation for Nursing

Watson's (1985) Theory of Caring provides the philosophical foundation for practice within the institution. Watson's carative factors form the basis for the provision of care as well as the framework for gathering evidence to support practice. The following 10 primary factors are key to studying and understanding nursing as the science of caring at the authors' institution: the formation of a humanistic-altruistic system of values; the instillation of faith and hope; the cultivation of sensitivity to one's self and to others; the development of a helping and trusting relationship; the promotion and acceptance of the expression of positive and negative feelings; the systematic use of the scientific problem-solving method for decision making; the promotion of interpersonal teaching and learning; provision for a supportive, protective, and (or) corrective mental, physical, sociocultural, and spiritual environment; assistance with the gratification of human needs; and the allowance for existential and phenomenologic forces (Watson, 1985). Considerable effort has been given to developing and integrating these factors throughout the institution (Birk, 2007). The concept of caring is applied to patients, healthcare providers, and all staff within the hospital.

Administration

Figure 1 describes the interactions of various components of the nursing organization in relation to EBP. A central feature of this model is the close working relationship of the chief nurse executive, the director of performance improvement (quality assurance), and the EBP consultants. The chief nurse executive is committed to advancing EBP and provides the necessary support for individuals to pursue evidence in relation to a clinical problem. The goal of continually improving practice is a given within the organization, and collecting data before and after any attempt to change practice is required. Nurse managers, educators, and bedside nurses are encouraged to identify practice problems and work with others to resolve them. Performance evaluations are, to some extent, based on a willingness to continuously improve practice by gathering evidence and/or translating existing evidence into practice. Movement to the top of four levels of the clinical ladder requires bedside nurses to be actively involved in the conduct of a project. The director of performance improvement works closely with the EBP consultants, rather than in isolation, to develop projects together, mentor students in clinical doctoral programs, and discuss overall goals toward improving nursing practice.

Research, Evidence-Based Practice, and Performance Improvement Activities

Clarity of institutional performance improvement goals assists nurses to understand expectations relative to EBP as well as resources available. Clear definitions of research, EBP, and performance improvement, as well as a description of associated activities, have been approved by the institution's nursing and allied health research council. The following descriptions are provided to all nurses involved in EBP.

Evidence-based practice: EBP is an integration of the best evidence available, clinical expertise, and the values and preferences of the individuals, families, and communities who are served (Rycroft-Malone, Bucknall, & Melynk, 2004).

EBP projects are defined as those projects that address a clinical issue that has immediate implications for practice. Participants may be patients and/or healthcare providers. Results may be generalizable to the population of interest. Usually, however, results initially are applicable to the project sample. Watson's (1985) Theory of Caring forms the conceptual base for most projects. The process used is as follows: (a) identification of a clinical problem or issue, (b) involvement of constituency, (c) selection of an intervention, (d) selection or development of measures, (e) collection of data pre- and postintervention, (f) analysis of data (both descriptive and inferential statistics), (g) implications for practice articulated, (h) change in practice, and (i) practice change monitored for future opportunities for improvement. Projects also may involve collection of baseline data and or secondary analysis of existing data sets. In general, EBP projects are submitted to the institutional review board for approval.

Research: Research is defined as "a scientific process that validates and refines existing knowledge and generates knowledge that directly and indirectly

influences nursing practice" (Burns & Groves, 2008, p. 5).

Hospital-based research at the authors' institution requires the stringent application of quantitative and/or qualitative methods. Control of extraneous variables, reliable and valid measures, power analysis to determine sample size, and application of advanced as well as basic statistics are reflected in quantitative projects. Qualitative projects are based on a specific methodology with strict adherence to the tenets of that approach. Participants may be patients and/or healthcare providers. All research is submitted to the institutional review board for approval.

Performance improvement: Performance improvement analyzes systems and recommends changes to the system to obtain good outcomes. Performance improvement employs various methods and uses specific tools to create system changes and ensure systems run safely. Organizations achieve good outcomes through process change that identifies the gaps between current state practices and ideal performance. Performance improvement entails designing and implementing evidence-based interventions to fix root causes and measures effectiveness of the change against internal and external benchmarks that reflect optimal performance. Performance improvement operates on a continuous cycle, ever improving on results.

Performance improvement projects incorporate an ongoing process that (a) identifies areas for improvement, (b) designs system improvement plans, (c) implements measurable improvement strategies, (d) evaluates results based on data analysis, and (e) makes changes to strategies to further enhance performance. Performance improvement projects may occur in clinical and nonclinical areas of healthcare focusing on an area or issue staff or leaders identify as needing improvement. Projects usually begin with those systems that affect high-risk areas, such as the operating suite and intensive care units; infection prevention issues; and high-risk patient populations such as neonates, pediatrics, and ventilator-dependent patients; as well as patient safety issues such as "lookalike" or "soundalike" drugs and wrong-site surgery. Depending on the scope, the project may or may not require institutional review board approval. An exemplar performance improvement project is designing a process where staff checks medications for accuracy when patients leave the hospital so patients go home with an accurate medication list and know what medications to take at home.

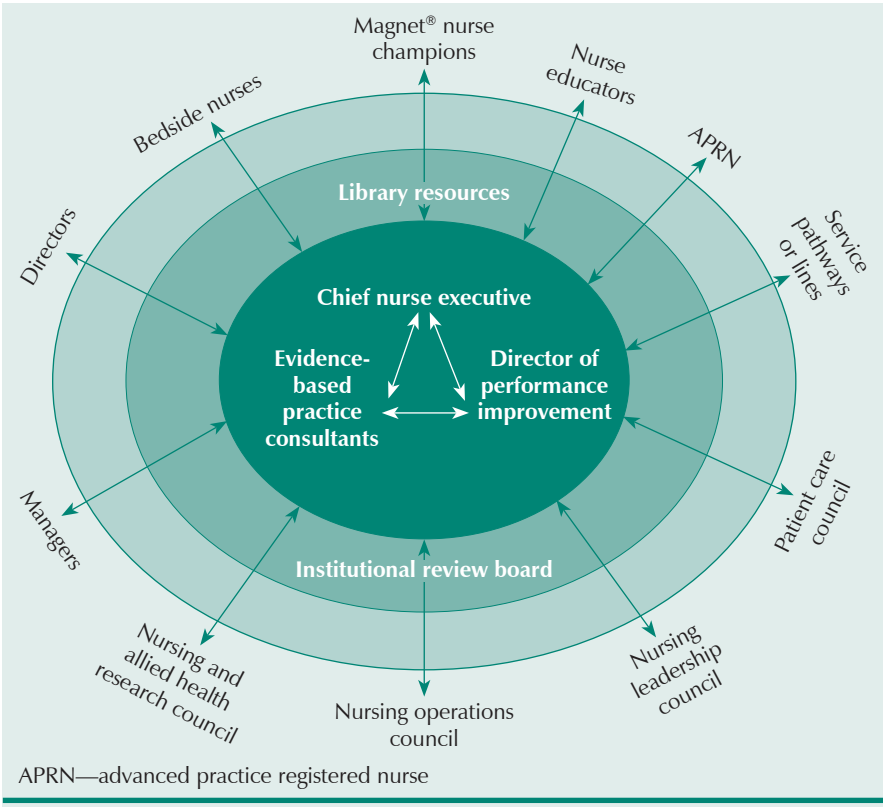

Figure 1. Central Baptist Hospital Operational Evidence-Based Practice Model

Considerable overlap obviously exists among EBP projects, research, and quality improvement projects. The same set of methods form the foundation for each approach. Basic differences include the stringency regarding the application of methods (e.g., use of power analyses, measurement requirements), the purpose of the project (e.g., processes versus specific issues), timing (e.g., desire for immediate versus long-term change in practice), institutional review board approval, and the need for replication of results outside of the institution.

Resources

Resources committed to EBP include two full-time librarians and three part-time EBP consultants. The EBP plan is designed to have representation from each of three universities within the service region of the hospital. One faculty member is a half-time consultant; the other two give 20% of their time per week. Consultants provide initial consultation, project design, and assistance with grant writing, literature reviews, institutional review board applications, data input, data analysis, writing of abstracts, and publications. Consultants also assist with the design of databases as needed. Consultants must have skills in research design, evaluation methods, psychometrics, statistics, and use of a statistical program. In addition, they develop and conduct seminars for new graduates entering the employ of the hospital and nurses wanting to move to a higher level on the clinical ladder. Advanced classes also are available for directors and managers.

Consultants' goals are to assist healthcare providers within the institution to develop and conduct practice projects that will improve patient care. Projects may or may not be generalizable to other like institutions. Results are presented and published as appropriate. In addition, a research symposium is conducted each year at the institution. Healthcare providers submit abstracts for poster and oral presentations and an award is given to the project that is methodologically sound and is most likely to improve patient care.

Communication Strategies

Strategies designed to facilitate EBP within the hospital include the development of groups dedicated to EBP as well as formalized modes of communication

within the organization that support all efforts to change practice. For example, the Nursing and Allied Health Research Council meets bimonthly to review ongoing projects and approve new efforts. The council consists of the chief nurse executive, EBP consultants, staff nursing representatives, nurse educators, managers, a librarian, a nurse epidemiologist, and quality improvement staff. Groups represented in the organizational EBP model communicate on a continuous basis regarding ongoing projects. EBP is a standing agenda item for all meetings of these groups and a review of relevant projects occurs at each meeting. Projects are presented to interested groups throughout the hospital and at the annual research symposium. A listing of ongoing projects is given to nurses who participate in the seminars on research methods. Nurses then have the option of joining one of the projects or designing a new initiative. University students at the undergraduate and graduate levels often participate in EBP projects to meet program requirements. Students and faculty from three area universities are encouraged to work with nurses in the facility to better understand research and evaluation methods.

Evidence-Based Practice Projects in Oncology

The expanding development of the nurse navigator role has motivated the oncology clinical specialist in the institution to initiate a concept analysis of the idea followed by an evaluation plan that will provide outcomes of navigator activities. Another project was developed in response to a National Comprehensive Cancer Network (NCCN) mandate to assess the distress experienced by patients with cancer. The NCCN's (2011) Distress Thermometer is being used in radiation and outpatient infusion clinics, and patients with cancer as well as patients with other diagnoses are evaluated using this distress scale. Expected outcomes include extent of distress in the cancer population as compared to individuals with other diagnoses, types of distress experienced (e.g., physical concerns, emotional concerns), referral patterns, and results of referrals. A retrospective chart audit regarding the use of a method for enhancing physical activity among patients with breast cancer following surgery has led to a publication and a grant application to conduct a prospective study. In addition, a funded study has been designed to evaluate the effects of chair massage on diminishing distress among patients with cancer undergoing radiation and chemotherapy.

In other areas of the hospital, funded studies are examining the efficacy of different sleep surfaces for neonates and use of ultrasound as a treatment for deep-tissue injuries. Nonfunded projects include the evaluation of interventions to prevent readmission of patients with congestive heart failure, motivate new mothers to breastfeed, and enhance patient satisfaction through pet therapy. Numerous ongoing descriptive projects will provide baseline data before designing an appropriate intervention.

The success of EBP in this institution is a result of the five components described earlier. In addition to improvements in patient care based on evidence, outcomes include continuing certification as a Magnet hospital and maintaining high levels of nurse work satisfaction, strong retention rates, a high percentage of associate-degree nurses returning to school for baccalaureate degrees, and strong connections with university students at all levels.

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Leadership & Professional Development

This feature provides a platform for oncology nurses to illustrate the many ways that leadership may be realized and professional practice may transform cancer care. Possible submissions include, but are not limited to, overviews of projects, accounts of the application of leadership principles or theories to practice, and interviews with nurse leaders. Descriptions of activities, projects, or action plans that are ongoing or completed are welcome. Manuscripts should clearly link the content to the impact on cancer care. Manuscripts should be six to eight double-spaced pages, exclusive of references and tables, and accompanied by a cover letter requesting consideration for this feature. For more information, contact Associate Editor Mary Ellen Smith Glasgow, PhD, RN, ACNS-BC, at maryellen.smith.glasgow@drexel.edu or Associate Editor Judy Schreiber, RN, PhD, at judy.schreiber@louisville.edu.