Bridging the Research-to-Practice Gap: The Role of the Nurse Scientist

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Objectives: *To describe the emerging role of the nurse scientist in health care organizations. Historical perspectives of the role are explored along with the roles of the nurse scientist, facilitators, barriers, and future implications.*

Data Sources: *Relevant literature on evidence-based practice and research in health care organizations; nurse scientist role; interview with University of Colorado nurse scientist.*

Conclusion: *The nurse scientist role is integral for expanding evidence-based decisions and nursing research. A research mentor is considered the most important facilitator for a successful nursing research program.*

Implications for Nursing Practice: *Organizations should consider including the nurse scientist role to facilitate evidence-based practice and expand opportunities for nursing research.*

Key Words: *Nurse scientist, evidence-based practice, research, magnet*

Health care organizations across the United States are striving to bridge the gap between research and evidence-based practice (EBP), with hopes to improve patient outcomes, further quality of care, and lower health care expenditures. Nurses are the largest health care work force and are responsible for around-the-clock nursing care in the hospital. They have an increasing role in ambulatory settings, especially in oncology clinics and inpatient units where nurses deliver chemotherapy, provide patient education, and provide supportive care throughout the cancer continuum. The Institute of Medicine, whose aim is to achieve 90% of clinical decisions to be

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evidence-based by 2020, recognizes the leadership of nurses to bridge this research and EBP chasm.[1] The organizational nurse scientist is an evolving role, designed to bridge the gap between research and EBP. The nurse scientist can be especially beneficial in the oncology setting where evidence evolves rapidly; therefore a need exists to quickly translate research into practice. This article describes the background of the nurse scientist role, the functional components of the role, barriers and facilitators of the role, and strategies for role integration and stimulation of research and EBP within an organization. Successful implementation of the role is highlighted through exemplary models.

Nurse Scientist Role: Historical Aspects

EBP and research have provided the foundation of nursing since its inception. Florence Nightingale is considered the first nurse scientist because she explored environmental factors that contributed to patient wellness, including ventilation, noise, light, cleanliness, and therapeutic communication.[2] While nursing research evolved throughout the 20th century, nurse scientists were primarily employed in academia, conducting research in collaboration with health care organizations but employed outside of the health care setting. In many ways, the bridge between research and practice widened as nurse scientists moved further from the bedside.

In the 1980s, nursing leaders began to recognize that nursing knowledge accrued over time at the bedside had gone uncharted and unstudied. A distinction between practical and theoretical knowledge was essential in moving nursing science forward. Dr. Patricia Benner published her work *From Novice to Expert,* and acknowledged the clinical expertise and practical knowledge of nurses that evolves over time.[3] Both tapping into clinical expertise at the bedside to discover new knowledge and translating evidence into practice at the bedside provide a mechanism to close the research-to-practice gap. Ongoing interaction with clinically expert nurses at the bedside is a foundational role of the nurse scientist.

The Magnet Program marks another progressive move toward the nurse scientist role. In 1983, the American Academy of Nursing Task Force on Nursing Practice in Hospitals identified hospital environments that promoted quality patient care and had an innate ability to recruit and retain nurses. In 1994, the University of Washington in Seattle became the first Magnet-designated organization. Magnet's recognition of nursing science quickly evolved through recognition of new knowledge, innovations and improvements, which are key components of the Magnet model.[4] Within this model domain, EBP and research are integrated into both clinical and operational processes. This requires nurses to be educated about EBP and research to provide safe, quality care to patients. Nurses are also expected to generate new knowledge within the organization by conducting independent research. Innovations in patient care, nursing, and the practice environment are the hallmark of organizations receiving Magnet recognition. Establishing new ways of achieving high-quality, effective, and efficient care is the outcome of transformational leadership, empowering structures and processes, and exemplary professional practice in nursing.[4] One study indicates that Magnet organizations report that the professional practice environment mediates the relationship between being "Magnet" and nurse-reported quality of care.[5]

Health care organizations around the globe are now examining creative approaches to increase nursing EBP and research at the bedside. Four models that exist include:

1) Collaboration and guidance from Academic Researchers,
2) Contracted nurse scientist,
3) Nurse scientist embedded within the organization, or
4) Shared model between the health care organization and the College of Nursing.[6]

The first two models involve collaborative relationships with nurse scientists employed outside of the organization. The embedded nurse scientist is employed solely by the organization and has the advantage of an ongoing presence in the organization. The fourth model includes nurse scientists who are employed part-time by the organization and part-time by the College of Nursing with presence noted in both the health care environment and the academic setting.

Roles of the Nurse Scientist

The nurse scientist is engaged in an overabundance of roles within the organization and often