Translating Evidence-Based Practice: Safe and Accurate Blood Pressure Measurement in a Comprehensive Cancer Center

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Hospitals and ambulatory outpatient care centers provide various levels of care to increasing numbers of acutely ill patients. Healthcare providers (HCPs) rely on technology to complement and enhance their ability to accurately and quickly assess patient status. Accurate blood pressure (BP) measurements are important for the routine monitoring of patients' conditions and during administration of blood products, chemotherapy, and other medications. Infection control also is a critical priority for patient safety, quality care, and economics. Regulatory and credentialing agencies such as the Joint Commission, American Nurses Credentialing Center Magnet Recognition Program®, and the Agency for Healthcare Research and Quality (AHRQ) monitor institutions and HCPs to ensure that patients are receiving safe, high-quality care.

Evidence-based practice is a professional requirement at the University of Texas M.D. Anderson Cancer Center in Houston, TX, and has been for several years. HCPs must support their practice with convincing evidence, not just operate on intuition or anecdotes. When clinical practice requires improvement, nurses must identify a process of change and develop the skills needed to navigate the change.

At M.D. Anderson, a staff nurse (the author) identified several questions regarding BP measurement, which generated the following research questions.

- Are automatic BP devices as accurate as manual BP devices (aneroid manometers)?
- Are the aneroid manometers calibrated routinely and correctly and in good repair?
- Are patients consistently being assessed for correct size of BP cuff to ensure accuracy?
- Does reuse of BP cuffs for multiple hospitalized patients affect infection control?

A more pressing question was, "Can a staff nurse, whose only job is to provide direct patient care for hospitalized patients with cancer, effect a change in practice in a large, tertiary teaching hospital?" The answer to that question was a resounding "Yes," as evidenced by the project outlined in this article.

The purpose of this article is to describe an evidence-based project regarding the use of aneroid manometers and BP cuffs for multiple hospitalized patients and the changes in practice that occurred as a result of the project.

Background

Healthcare-associated infections are those that patients acquire during the course of receiving treatment for other conditions in a healthcare setting (Scott, 2009). Such infections are the most common complication of hospital care and are among the top 10 leading causes of death in the United States (AHRQ, 2009). The financial burden attributable to the infections is estimated at $28 billion–$33 billion in excess healthcare costs each year (Scott, 2009).

Promoting the use of evidence in practice is an active process. Different types of dissemination strategies are needed to promote the use of research evidence in clinical and administrative healthcare decision making, and the strategies must address individual clinicians and organizational perspective (Titler, 2006). Evidence-based practice has been defined by some experts as the integration of best research evidence with clinical expertise and patient values (Titler, 2006). According to LoBiondo-Wood and Haber (2006), evidence-based practice is "the conscious and judicious use of the current best evidence in the care of patients and delivery of healthcare services" (p. 7).

RNs at many hospitals have encountered wall-mounted BP manometers that are loose, are not working correctly, or have the wrong cuff size for the patient. Such situations are time consuming for nurses, who have to resolve the problems before checking patients' BP. The quick answer generally is to obtain a portable aneroid manometer. However, a portable aneroid manometer is not always a good solution because it may require a nurse to leave the bedside of a critically ill patient. The equipment may not be in a state of good repair and may be unusable or unreliable. Additionally, the reuse of a BP cuff by multiple patients may contribute to hospital-acquired infections.

In December 2006, the author made a list of concerns with the process of taking accurate noninvasive BP measurements. He thought, "Who wants to hear these complaints, and who is willing to assist in the changing of clinical practice?" Fortunately, in early 2006, M.D. Anderson had implemented a revised shared-governance model that enabled clinicians to bring forth clinical practice issues. The Nursing Practice Congress (NPC) is based on a congressional model and is made up of peer-elected direct-care clinical nurses, advanced practice nurses, and specialty nurses. Representatives from information systems, quality improvement, and nurse management also were included. The NPC provides a structure to formally recognize clinical concerns and make decisions by member vote. The intent, consistent with Magnet guidelines, is to ensure that direct-care nurses can identify and change clinical practice issues effectively.

The new shared-governance model provided a tool for the author to assert leadership over a process of change. It was an interesting application of the reversal of the typical top-down approach to institutional change. Bedside RNs initiated and implemented a change to clinical practice from the bottom up.