Influence of RN BS Education on Nursing Practice: *Outcomes Create a Moral Imperative for Nurse Leaders*

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In 2013, the New York Organization of Nurse Executives and Leaders (NYONEL) sponsored a contest to systematically gather testimonials from direct care providers that would further support the concept that education to the bachelor of science (BS) degree makes a difference in the clinical practice of individuals already licensed as registered nurses (RNs). This initiative was catalyzed by nursing leaders in New York State (NYS) who were members of the Coalition for the Advancement of Nursing Education, leading the efforts that support legislation that would require a new registered nurse to obtain a bachelor's degree in nursing within 10 years of licensure.

BACKGROUND

For many years, nursing has been divided on the educational level required for entry into practice as a registered professional nurse. The first formal consensus emerged in 1965 when the American Nurses Association (ANA) published a historical position paper recommending baccalaureate-in-nursing (BS) preparation as entry level. This launched the debate over professional and technical nursing education. In 1978, the ANA House of Delegates again endorsed BS as entry level (to commence in 1985); however, this never transpired. Although the national initiatives stalled, the NYS Board for Nursing unanimously approved a motion in 2003 to require BS preparation within 10 years of initial licensure in New York State. To date, this initiative has also struggled to come to fruition.

In 2003, Dr. Linda Aiken and colleagues[1] published the first large-scale study illustrating the positive impact of nurse baccalaureate preparation on patient outcomes. This study examined whether the proportion of RNs prepared at the BS level or higher was associated with surgical patient mortality or failure to rescue. This study included 80% (n = 168) of Pennsylvania's adult, acute care general hospitals, more than 10,000 nurses, and over 232,000 patient-discharge abstracts. After adjustments for patient and hospital characteristics, nurse staffing and experience, and whether the surgeon was board certified, the researchers found that a 10% increase in BS-prepared RNs was associated with a 5% decrease in the likelihood of patient mortality within 30 days of admission and the odds of failure to rescue. Furthermore, Aiken and colleagues[1] estimated that "…the odds of 30-day mortality and failure to rescue would be 19% lower in hospitals where 60% of the nurses had BSNs or higher degrees than in hospitals where only 20% of the nurses did."[1(p1620)]

Using data from the 2003 study, Aiken et al.[2] examined the effects of nurse-practice environment on patient outcomes. After controlling for nurse staffing and educational preparation, they concluded that "surgical mortality rates were more than 60% higher in poorly staffed hospitals with the poorest patient care environments than in hospitals with the better care environments in the sample, the best nurse staffing levels, and the most highly educated nurses."[2(p228)] The researchers go on to estimate that 40,000 patient deaths per year could be averted by maximizing all 3 variables.

In a 2007 Canadian study by Tourangeau et al.,[3] the researchers examined nursing-related determinants of acute medical patients' 30-day mortality. They established 45% of the variance was explained by 8 nurse-related predictors, one of which was baccalaureate preparation. Every 10% increase in the proportion of BS-prepared RNs was associated with 9 fewer deaths per 1000 discharged patients. Likewise, other studies found that among other factors, BS preparation contributed to decreased patient mortality.[4–6]

Based on this compelling evidence, the Institute of Medicine published a report in 2011 entitled *The Future of Nursing: Leading Change, Advancing Health,*[7] and articulated the recommendation that by 2020, 80% of RNs be BS-prepared. The ANCC Magnet Recognition Program (2008) lent its support for this recommendation by adding a source of evidence requesting that Magnet hospitals, and those on the journey to Magnet designation, outline their plan to reach the 80% recommendation by 2020.

Two large-scale studies published in 2011 validated the findings from Aiken and colleagues[1] original 2003 work. Utilizing data from more than one million hospitalized surgical patients and 20,000 nurses from four states, Kendall-Gallagher et al.[8] studied whether staff nurses with specialty certification positively impacted mortality and failure to rescue. The researchers determined that "Decreased risk of inpatient 30-day mortality and failure to rescue were associated with higher proportions of nurses with BSN and higher degrees.… Specialty certification of nurses was also associated with lower mortality and failure to rescue, but only among nurses with BSN or higher education."[8(p192)] BS and higher educational preparation decreased mortality and failure-to-rescue rates by 6%, and specialty certification decreased these rates by an additional 2%.

In the second study, using the same data, Aiken et al.[9] examined the relationship between work environment, nurse education, and staffing on patient mortality and failure to rescue. This was the first study to reveal "the conditional circumstances under which particular nursing investments yield the best outcomes."[9(p1047)] The researchers determined that the nursing work environment was critical to achieving positive patient outcomes. However, they concluded that a 10% increase in BS-prepared RNs decreased the likelihood of patient death or failure to rescue by approximately 4%, regardless of the work environment.

The latest literature continues to illustrate the positive effects of higher proportions of BS-prepared RNs within acute care hospitals. A 2013 study by Blegen et al.[10] is the first to demonstrate a relationship between higher proportions of BS-prepared RNs with nurse-sensitive indicators other than patient death and failure to rescue. The researchers determined that in this sample of 21 University HealthSystem Consortium hospitals, the ones with higher proportions of BS-prepared RNs "…had lower rates of HAPUs, postoperative DVT/PE, and LOS as well as failure to rescue and CHF mortality."[10(p 4)]

These extraordinary patient outcomes translate to healthcare dollars saved. Through reduction of hospital-acquired pressure ulcers, NYS is positioned to save approximately $104 million each year.[11] Decreased length of stay is not only cost averting, but also potentially revenue generating as patient capacity is expanded. The value of decreasing patient mortality is incalculable.

The evidence clearly indicates that higher proportions of BS-prepared RNs within acute care hospitals enhance quality of care and patient outcomes, and hence decrease healthcare costs. As a result, distinguished professional groups have conveyed rigorous outcome goals to achieve. For these reasons, increasing the proportion of BS-prepared RNs in acute care hospitals must be a priority for nursing leaders. This intensifying relationship between the level of nurse