The Initiative to Move Toward a More Highly Educated Nursing Workforce: Findings from the Kansas Registered Nurse Workforce Survey

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The Institute of Medicine report, *The Future of Nursing: Leading Change, Advancing Health*, recommends increasing the proportion of registered nurses (RNs) with a baccalaureate in nursing (BSN) to 80% by 2020. Kansas lacks a central mechanism to collect current data on the RN workforce; therefore, detailed information about the RN workforce, including current educational level, is unknown. The purposes of the survey were to (a) describe the Kansas RN workforce, (b) examine the relationship between nursing education and employment, (c) compare and contrast the workforce to other states and national data and (d) discuss implications of strategic planning and policy making for nursing education. The on-line Kansas RN Workforce Survey link was sent to 44,568 RNs by e-mail, and the response rate was 15.6% (n = 6,948). The survey consisted of 34 questions on demographics, education, licensing, and employment. Kansas RNs were predominately women (92%) and Caucasian with an average age of 47.7 years. Approximately 46.3% of RNs obtained a BSN as their initial education. Analysis of highest level of nursing education showed that 60.5% of Kansas RNs were at least baccalaureate prepared, with 14.9% obtaining a master's degree or higher. More than 50% of RNs worked in hospitals as staff nurses. RNs with advanced education were more likely to be employed, tended to work in academic settings or ambulatory clinics, and were more likely to be faculty or in management/leadership positions. Overall, the Kansas RN workforce is closer to reaching the 80% baccalaureate-prepared goal recommended by the *Future of Nursing* report than has been reported. Educational level was closely related to RNs' choices of work settings and positions. Additional work such as promoting academic progression needs to continue to build a more highly educated RN workforce. (Index words: Registered nurse; Workforce; Nursing education; Employment; Institute of Medicine; Future of Nursing) J Prof Nurs 31:452–463, 2015.

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THE INSTITUTE OF Medicine (IOM) report, *The Future of Nursing: Leading Change, Advancing Health*, calls for a more highly educated nursing workforce by increasing the proportion of nurses with a baccalaureate degree to 80% and doubling the number of nurses with a doctorate by 2020 (IOM, 2011). An adequate supply of registered nurses (RNs) in the health care workforce is essential to ensure a safe and effective health care system. There are studies showing that the supply of RNs has a substantial impact on the health outcomes of patients (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Aiken et al.,

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2014). The increasing health care needs of an aging population and decreasing supply of RNs from the aging RN workforce could pose a potential risk to the safety and welfare of the population. In contrast, a more highly educated and adequate supply of RNs will be better prepared for the increasing health care demands and promote optimal patient outcomes. Therefore, accurate data on the RN workforce are necessary to assist policy makers and educators in developing strategic plans to build a highly educated workforce.

In Kansas, the Promoting Nursing Education in Kansas (PNEK) team was formed in 2013 as a State Implementation Program initiative funded by the Robert Wood Johnson Foundation (RWJF). The PNEK team consists of key leaders from Kansas Action Coalition (a statewide collaborative effort to implement the eight IOM recommendations), doctorally prepared nursing faculty, nursing students, and a project manager. The aim of the PNEK project is to increase the proportion of Kansas nurses with a baccalaureate degree toward the 80% goal. Understanding the Kansas RN workforce and the current educational levels was the essential first step in the project. The PNEK team partnered with the Kansas State Board of Nursing (KSBN), the Kansas Department of Labor (KDOL), and KansasWorks (part of the Kansas Department of Commerce) in conducting a statewide survey of the RN workforce. The purposes of the study were to (a) describe the current Kansas RN workforce, including its educational levels; (b) examine the relationship between nursing education and employment; (c) compare and contrast the workforce to other Midwestern states and national data; and (d) discuss implications of strategic planning and policy making for nursing education.

Literature Review

Nurses comprise the largest portion of the health care workforce. A better understanding of the nursing workforce regionally and nationally helps policy makers effectively develop strategic plans to accommodate the demands of well-trained and competent nurses for the protection of public safety in health care. The importance of nursing workforce data is emphasized by the IOM's *Future of Nursing* (*FoN*) report. One of the *FoN* report recommendations is to build an infrastructure for the collection and analysis of interprofessional health care workforce data (IOM, 2011). Traditionally, the U.S. Health Resources and Services Administration (HRSA) conducted the National Sample Survey of Registered Nurses every 4 years since 1977; however, the latest completed survey was in 2008 (HRSA, 2010). In 2009, the National Forum of State Nursing Workforce Centers called for collecting consistent data through the Minimal Dataset (MDS) of the nursing workforce at the state level, including supply, demand, and nursing education program (The National Forum of State Nursing Workforce Centers, 2014). The purpose of the MDS is to establish standardized nursing workforce data, collected at the state level, to create a national repository. This approach would provide reliable national and state data for policy making regarding the nursing workforce. Currently, there are 33 states that have established nursing workforce centers and 27 states actively collecting supply data through relicensure surveys. However, there is no nursing workforce center established in Kansas to regularly collect nursing workforce data. Only very limited data such as age, gender, race/ethnicity, and initial nursing education are collected by the KSBN during the initial license application (KSBN, 2014).

Access to accurate and comprehensive nursing workforce data can help states in nursing workforce development. For example, the Nebraska Center for Nursing has been collecting nursing workforce data since 2001 and has used the data to analyze trends to predict significant gap in the demand and supply of nurses (Nebraska Center for Nursing, 2013). Similarly, Texas collects nursing workforce data during the license renewal process and has published trend reports and white papers with recommendations regarding nursing workforce disparities, educational pipelines, recruitment, and retention of nurses (Texas Department of State Health Services, 2015). The nursing shortage has been identified as a critical issue to address at both the state level and nationally. More importantly, with the elderly as the fastest growing segment of our population, health care needs are growing. Colorado, as the fourth fastest growing state in the nation, is estimated to be short of 6,300 RNs by 2018, with 72% increase in older population ($\geq$65 years) and 32% of RNs 55 years or older (Colorado Center for Nursing Excellence, 2010). In Kansas, our ability to make accurate estimates and predictions for the nursing workforce is challenged because of the very limited data that are available. According to the available resources, the number of RNs per 100,000 population in Kansas is 1,097.2, which was slightly higher than the neighboring state Missouri (1,083.5), but lower than Nebraska (1,274.2) and Iowa (1,162.6; HRSA, 2012).

Nursing education is a key to prepare competent nurses who can provide safe, high-quality care to patients. Additionally, advanced nursing education is needed for nurses to fulfill roles such as faculty, advanced practice nurses, researchers, and administrators. Currently, 61% of RNs have a baccalaureate or higher degree at the national level (Budden, Zhong, Moulton, & Cimiotti, 2013). In 2009, per the American Community Survey, approximately 48% of Kansas RNs had at least a bachelor of science in nursing (BSN; Bates & Spetz, 2012). In comparison to the surrounding states, the proportion of Kansas RNs with a BSN or higher degree was higher than Missouri (45.6%), Texas (45.2%), Oklahoma (37.6%), Iowa (33.7%), and Arkansas (33.5%), but lower than Nebraska (55.3%) and Colorado (53.7%). The proportion of BSN-prepared nurses in these states is still far from the 80% goal recommended by the *FoN* report. More accurate and current assessment of the education level would help develop initiatives to move toward a more highly educated nursing workforce.

Methods

The Kansas RN Workforce Survey was drafted by the PNEK team and included questions adapted from the