Nursing Competencies in the Nursing Curriculum:
Implications for Education and Practice

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ABSTRACT

Florence Nightingale is the modern founder of nursing and professionalized nursing by creating training programs for aspiring nurses. Nursing standards for education started in the early days of nursing education, beginning in the late 1800s. National accreditation standards shape nursing educational programs and clinical practices; however, state-level boards of nursing establish and monitor practice standards. Nursing education accreditation agencies recently shifted their focus to competency-based education, including core abilities required to function as a nurse, provide comprehensive care, and meet patients' complex and diverse needs in every setting. This manuscript reviews the state of current competencies that educational institutions are adopting. A relationship between competencies, standards of practice, and emerging opportunities is needed to develop further education programs that address current clinical practice needs in today's technical and post-pandemic work and clinical environments.

KEYWORDS

Competencies, Healthcare Standards, Nursing Education, Nursing Practice, Nursing Staffing, Nursing Standards, Patient Outcomes, Patient Safety, Professional Organizations

BACKGROUND

For over 20 years, nurses have ranked as the most trusted, honest, and ethical profession (Brenan, 2023). However, many work-environment-related challenges impact the profession and standards of practice and patient outcomes. Over 5.2 million nurses are practicing in the United States (Smiley et al., 2023). Nationally, the nursing workforce is getting younger due to a mass exodus of experienced nurses during the pandemic. An estimated 200,000 nurses left the profession from 2020-2022, and 25% of all nurses plan to leave or retire in the next five years (Smiley et al., 2023). Inadequate staffing, heavy workloads, workplace safety, and unprecedented fatigue, stress, and burnout during the COVID-19 pandemic have negatively affected the U.S. nursing workforce, particularly younger,

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less experienced RNs (Aiken et al., 2023; Martin et al., 2023). In the recently published US Clinician Wellbeing Study of physicians and nurses during the COVID-19 pandemic, nurse burnout was directly associated with a higher turnover of nurses and physicians. Many nurses rated their hospitals poorly on patient safety and quality outcomes, reported too few nurses are available to care for patients, a poor work environment (leadership, teamwork), and lacked confidence in management (Aiken et al., 2023). Instead of workplace wellness and resilience programs, nearly 90% of nurse respondents desired improved staffing to lower nurse-to-patient ratios (Aiken et al., 2023).

Nurse-to-patient ratios have long been a contentious topic. California is the only state that have state-mandated minimum nurse-to-patient ratios (Aiken et al., 2010). When hospitals adhere to the law, lower ratios are consistently associated with significantly lower patient mortality, lower nurse burnout and job dissatisfaction, and higher quality of care (Aiken et al., 2010). Unlike pilots (*Pilot Regulations*, 2017) or truck drivers, no federal regulations limit the number of hours nurses can work (Institute of Medicine (US) Committee on the Work Environment for Nurses and Patient Safety & Page, 2004). Forcing some nurses to work more than 16 hours a day for multiple days due to mandatory overtime (Rogers et al., 2004), especially during the pandemic when hospitals were consistently short-staffed (Martin et al., 2023). In sentinel research conducted by Rogers and colleagues (2004), the likelihood of a nurse making an error or near error was three times higher when nurses worked 12.5 hours or more (Rogers et al., 2004). There was no relationship between the nurses' age, hospital size, hospital unit type, and errors or near errors for work hours and overtime (Rogers et al., 2004). They concluded that longer shifts adversely affect patient care and contribute to burnout and retention (Rogers et al., 2004). Compared with other high-stakes professions, such as truckers, managed by specific industry-mandated work and hours of sleep rules (*Summary of Hours of Service Regulations*, 2022), nurses' practice standards lack guidance on work hours and environment. Whereas such specific federal standards do not govern nursing work environment regulations, professional nursing organizations guide the educational programs *and* require the nursing curricula to meet accreditation criteria successfully.

NURSING EDUCATION AND PROFESSIONAL STANDARDS

Florence Nightingale is the contemporary founder of nursing and professionalized nursing by creating training programs for aspiring nurses (Winkelstein, 2009). Serving as a nurse to support the British Soldiers in Crimea, she demonstrated a correlation between the environmental conditions of the wards and whether the soldiers survived and could return to battle. Nightingale noted when she arrived, nearly 60% of the soldiers died due to wounds. She quickly implemented environmental and sanitary conditions, decreasing the mortality rate by 20% (Bostridge, 2009). Before her arrival, Florence studied mathematics and statistics and demonstrated a correlation between an adequate hospital environment for recovery and survival. The central tenets of her environmental theory still hold today for optimal patient outcomes: fresh air, pure water, efficient drainage, cleanliness/sanitation, and light/direct sunlight. The focus on a healing environment and having the resources to implement these tenets was foundational to nursing, infection control (e.g., aseptic techniques), and hospital management standards that we still employ today (Gilbert, 2020).

As the nursing profession developed, the primary tenets of Nightingale's hospital management and the nursing environment have become part of professional nursing education programs (Karimi & Masoudi Alavi, 2015) and evolved into their associated practice standards (Gaines, n.d.). Initial training focused on skill development, and nurses are licensed to practice as registered nurses (RN) after completing an accrediting nursing program and passing the National Council of State Boards of Nursing (NCSBN) National Council Licensure Exam (NCLEX) (National Council of State Boards of Nursing, 2023b). Nursing schools are ranked based NCLEX organizations rank nursing schools based on graduates' first-time NCLEX pass rate and schools publish these rankings for recruiting new students. First-time pass rates below 80% may result in letters or scrutiny of statewide licensing

boards, including the overarching state organizations board, the NCSBN. Nurses are licensed and registered in the state of their workplace.

NURSING FACULTY SHORTAGES

To overcome the national shortage of nurses, the profession must first overcome the shortage of nursing faculty. Shortages in nursing faculty have been attributed to teaching salaries that often do not align with clinical practice salaries, contributing to further faculty shortages, including early retirements and faculty turnover (*Nurse Salary Research Report*, 2023). Full-time faculty vacancies range from 7% to 10% across the country (American Association of Colleges of Nursing, 2022). Another bottleneck in clinical training is the limited number of students at a clinical site without interfering with the provision of actual nursing care. In addition, the pandemic resulted in an accelerated loss of practicing nurses due to Covid-related morbidity and mortality (workplace exposures), and faculty at retirement age using the pandemic as the item to retire fully, contributing to further faculty shortages (Martin et al., 2023). The AACN (American Association of Colleges of Nursing, 2022) reports that of the faculty vacancies a doctoral degree is required for 85% of them. The most common issues related to faculty recruitment were non-competitive salaries (68%) and difficulty finding faculty with the right specialty mix (59%) (American Association of Colleges of Nursing, 2022).

NATIONAL HEALTHCARE STANDARDS

The Institute of Medicine (IOM) (now National Academies of Medicine) gave prominence to importance of professional standards and competencies in their ubiquitous series identifying the quality chasm (Institute of Medicine, 2001). The IOM series documented the serious nature of poor health care quality. Subsequent publications include the National Academy of Medicine (NAM)'s "Health Professions Education; A Bridge to Quality" (2003) (Institute of Medicine et al., 2003), which is focused on reducing the burden of illness, injury, and disability to enhance the health status, functionality, and satisfaction of our patients and families. There requisites require a skilled workforce. The IOM then focused on the radical transformation to use good quality care versus what exists in practice. Subsequently, focusing on reducing the burden of illness, injury, and disability and enhancing satisfaction and functional status. To that end, the Institute of Medicine report "Health Professions Education; A Bridge to Quality" (Institute of Medicine et al., 2003) recommendations included the integration of core competencies into accreditation and accreditation processes across the professions. An outcome-based education system will better prepare clinicians for the needs of patients and a changing health system. With the rationale that typical clinical education programs are not responsive to shifting patient needs, healthcare expectations, practice requirements, or new technologies and lack an adequate focus on quality and outcomes (Institute of Medicine et al., 2003).

The IOM vision for health professions education includes: "All health professionals should be educated to deliver patient-centered care as members of an interdisciplinary team, emphasizing evidence-based practice, quality improvement approaches, and informatics" (Institute of Medicine et al., 2003) (p.3). Identified as the five core competencies, IOM recommends that all health professions integrate these to reform the health professions education. Furthermore, (Institute of Medicine et al., 2003) believes that a competency-based approach could improve quality as educators may use outcomes data for better patient care. A core set of competencies across the professions would need to occur at the national, state, and local levels, where all processes must be focused on the same outcome: the ability of professionals to provide the highest quality of care (Institute of Medicine et al., 2003) p.7). All licensed and regulated healthcare professions have designated standards, competencies, and accreditation programs.

The impact of the IOM series was also supported and further developed at the state level. For example, the importance of patient safety standards across the health professions led to the initiation of

the Michigan Health and Safety Commission (MHSC) (2006). The MHSC captures patient, provider, and insurance input, and with current literature and IOM guidance resulted in their report (Valade et al., n.d.). A section of the report was dedicated to Measure and Reward Performance by establishing appropriate standards for patient safety performance across the continuum of care, developing or adopting a common vocabulary and standardized data definitions. MHSC recommendations included setting dynamic benchmarks to measure progress and using the measured performance of Michigan's healthcare providers to inform ongoing improvement efforts and reward excellence. These recommendations spanned all healthcare providers that impact patient safety. The MHSC report also recommended, designing facilities, technologies, and healthcare processes for safety; embracing patients as active healthcare partners; incorporating safety in health professions education, and regulating and licensing with safety in mind (Valade et al., n.d.).

FUTURE OF NURSING AND COMPETENCIES

National and State recommendations influenced guideline documents in the nursing profession. The first Future of Nursing report (Institute of Medicine, 2011) explored how nurses' roles, responsibilities, and education need to evolve radically to meet healthcare demands and to advance American's health. A decade later, the Future of Nursing (FON) 2020-2030 report, advised that nursing education must integrate equity into education and evolve in four critical areas: "what is taught, how it is taught, who the students are, and who teaches them" (p.190). Currently, the benchmark of a "quality" nursing education stems from National Council Licensure Examination (NCLEX) pass rates, student graduation rates, and graduate employment rates (National Academies of Sciences, Engineering, and Medicine, 2021; *National Council of State Boards of Nursing*, 2023a; National Council of State Boards of Nursing, 2023b). The Future of Nursing 2020-2030 report recommends moving beyond the licensing exam to domains and competencies for equity, expanded learning opportunities, recruitment of and support for diverse, prospective nurses, and strengthening and diversification of the nursing faculty to meet the patient and family needs that present in both hospital and ambulatory care settings.

The Health Professions Education Executive Summary (2003) identified five issues hampering education that still impact nursing education and need further resolutions. First, health professionals are not adequately prepared to address shifts in the nation's patient population as they become more diverse, as they age, and as they experience more chronic physical and mental health conditions. Second, once a health professional enters the profession, they work in multi-disciplinary teams. However, they may not be educated or trained in team-based communication skills. Third, clinicians face a rapidly expanding evidence base but may be unprepared to access, evaluate, and implement current evidence successfully, hampering systematic improvement efforts. Fourth, systems-level training in understanding practice and its link with quality and safety outcomes is missing, limiting the opportunity to modify and improve practice. Finally, initial training on using technologies is typically included when entering a health system; however, basic knowledge about informatics, data use, and analytics is not included in the depth necessary for clinicians to individualize patient care. Unfortunately, these issues continue to hamper health professions' education and practice over two decades later.

CURRENT STATE NURSING EDUCATION

Several organizations exist nationally to accredit nursing programs, for example, the Accreditation Commission for Education in Nursing (ACEN); the Commission on Collegiate Nursing Education (CCNE) as part of the AACN; the Commission for Nursing Education and Accreditation (CNEA); and the National League for Nursing (NLN). Each organization accredits specific degree programs such that many schools of nursing are accredited by multiple accreditation agencies, requiring numerous and different standards particular to the accreditation agency. School of Nursing faculty need to be

current RNs in good standing and commonly have a graduate degree to provide classroom or clinical practice education to student nurses.

The certifying agencies establish minimum standards for nursing education to ensure the quality and integrity of nursing programs. The standards include board certification and licensing criteria, nurse educator qualifications, course requirements, and continuing program improvements (Gaines, n.d.; National Academies of Sciences, Engineering, and Medicine, 2021). Entry-level nurses (Bachelor's of Science in Nursing (BSN)) who graduate from an accredited school can take the NCLEX exam. After passing the exam, they can apply for licensure as registered nurses through state boards of nursing and become employed in that state.

The American Association of Colleges of Nursing (AACN) is the leading organization for nursing educational programs. The Commission on Collegiate Nursing Education (CCNE) (AACN, 2023) conducts the accreditation for both baccalaureate and master's degree programs, Doctor of Nursing Practice, post-graduate advanced practice registered nurse certificate programs, entry-to-practice nurse residency programs, and nurse practitioner fellowship and residence programs. The AACN has provided the educational framework for preparing nurses at four-year colleges. CCNE accreditation visits focused on meeting the defined nursing practice and education standards. CCNE does not accredit Philosophy of Science Doctorates (Ph.D.) programs in nursing.

AACN's Vision for Academic Nursing (American Academy of Colleges of Nursing, 2019) identified new thinking and approaches to its education to prepare the workforce for the future. In 2021 the "AACN Essentials: Core Competencies for Professional Nursing Education" (*American Association of Colleges of Nursing*, 2021) were approved for implementation and aimed to bridge the gap between education and practice. Competency-based education is described as a process whereby students are held accountable for mastering competencies deemed critical for an area of study. The AACN states that competency-based education produces learning and behavior that encourages conscious connections between knowledge and action. A standard set of definitions from competency-based education in the health professions for adopting these *Essentials* allows multiple stakeholders involved in health education and practice to share much of the same language. As nursing colleges embark on their journey to modify the curricula to meet the defined competencies, using such competencies will need extensive evaluation to determine its contributions to patient safety and quality outcomes.

The nursing profession is a well-established and trusted profession (Brenan, 2023) with a strong history documenting its impact on the nation's health due to its well-developed educational programs, high professional standards, and state-level monitoring of the licensing process and adherence to state-laws. As the country witnessed during the recent pandemic, the nursing and clinical professions are less regulated and protected in the clinical work environment than in their educational programs. Abundant research has established the relationship between long work hours, poor work environments, and patient safety and quality outcomes (Aiken et al., 2010, 2023; Martin et al., 2023; Rogers et al., 2004). The importance of the NCLEX exam for both the graduate new nurse *and* the educational programs must be recognized as the professional standard into the profession. In line with the recommendations from the impactful IOM reports (Institute of Medicine, 2001, 2011; Institute of Medicine et al., 2003; National Academies of Sciences, Engineering, and Medicine, 2021), a focus on competencies in education is transforming nursing education. The long-term impact of competency-based training on skill level, standards, professional development, and retention will be well studied and monitored. Advanced health IT and other technologies will play an essential role in education and practice and offer further opportunities to help alleviate ineffective and time-consuming coordination and practice challenges (Dzau et al., 2017, 2021). Our continued focus on practice standards and the technologies and equipment used in clinical practice will lead the nursing profession closer to Nightingale's goals of creating an optimum environment for healing and recovery that supports our nursing staff to practice safely and fully utilize their skills and competencies.

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