



Learning from Other Fields:
Program Accountability in Nursing
Education

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Abstract:

Nursing educators must prepare nursing students to be competent to practice. Since nurses are accountable to the public, the nursing profession has the responsibility to prepare entry-level nurses with the skills and ability to care for patients when they graduate. The nursing profession employs a number of strategies to ensure newly licensed nurses are prepared for practice. Some of these strategies are: the incorporation of national standards into curriculum, use of active learning strategies, use of simulation to increase clinical competence and extended nursing orientations for new graduates. This paper reviews measures developed to assure graduates from nursing education programs are accountable to the public, educational practices that ensure readiness for practice and the challenges of measuring program impact.

BACKGROUND

Nursing educators face the challenge of preparing nurses to be competent to practice within the current health care system. Since nurses are accountable to the public, the nursing profession has the responsibility to prepare entry-level nurses with the skills and ability to care safely and effectively for patients after they graduate. This important outcome frames the way the profession has developed the processes to ensure quality educational outcomes. While the nursing profession has not had the same scrutiny of its educational programs as the education profession, ensuring that new graduates are able to assume their new roles as professional nurses continues to be an important issue.

This paper will review the measures developed to assure graduates from nursing education programs are accountable to the public. In addition, it will focus on educational practices that ensure readiness for practice. It will also examine the challenges of measuring program impact.

EDUCATIONAL CHALLENGES

There are a number of current challenges for nursing educators. There will be a nursing shortage due to the reduced number of nurses in the nursing workforce and the impending retirement of a large group of experienced nurses in the next few years. In addition, there is a nursing faculty shortage. There is an increased interest in nursing as a profession, so there are increased applications to nursing schools. However, many qualified nursing applicants are turned away due to lack of faculty. Faculty age is increasing with a large number of faculty retirements occurring in the next decade. Higher salaries in clinical and other settings attract current and potential nurse educators away from teaching and nursing graduate programs do not graduate enough nurse educators to meet the demand (AACN, 2015).

Another major challenge is retention and turnover, which is an issue for new nurses. Kovner and colleagues (2014) found that 17 percent of new nurses leave their first nursing job within the first year, 31 percent by the second year, and by four and a half years, the turnover rate is close to 49 percent. By six years after graduation, the rate is about 55 percent. Turnover can have a financial impact on hospitals. The average cost of turnover for a bedside nurse ranges from \$36,900 to \$57,300 resulting in the average hospital losing \$4.9M – \$7.6M (NSI, 2015).

An additional challenge for nursing educators is finding clinical sites where nursing students can learn to practice. With increased numbers of nursing and other health professions, there is more demand for clinical sites, but fewer clinical sites are available (AAMC, 2013). This is due to a larger number of students needing sites and fewer clinical agencies willing to offer clinical sites for students. Clinical experiences are the cornerstone of nursing education. Nursing students need to have exposure and experience practicing in settings similar to where they will practice when they graduate. To address this challenge, nursing schools have been developing many alternative ways to provide this important aspect of clinical education. Clinical practicums in schools, outpatient settings and long-term care provide alternatives to hospital based clinical experiences. Nursing schools are increasingly turning to simulation to help students develop the clinical skills needed to practice. A recent study found that nursing students who had 50% of their clinical hours replaced by simulation performed no differently than nursing students who had traditional clinical experiences (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014).

TRENDS IN NURSING

There are a number of trends in nursing that are driving changes in how the profession educates nursing students. In 2011, the Institute of Medicine published the Future of Nursing Report, which examined the state of nursing and made recommendations for nursing to move forward as a profession. Many of the recommendations focused on nursing education. It called for removing barriers and creating pathways to increase the numbers of baccalaureate prepared

nurses and to increase the numbers of doctorally prepared nurses to serve as nursing leaders, researchers and educators. Implementation of these recommendations should help to reduce both the nursing faculty and nursing shortages.

Nursing educators are incorporating new teaching methods into nursing curricula. Nursing has been embracing the use of simulation to help standardize the clinical education that nursing students' experience. It has moved from teaching students procedures and tasks to fostering critical thinking based on the assumption that nurses who employ critical thinking will make better clinical decisions and respond to clinical situations better. In addition, nursing has been collaborating with other health professions to introduce interprofessional education activities that will prepare new nurses to practice within an interprofessional environment.

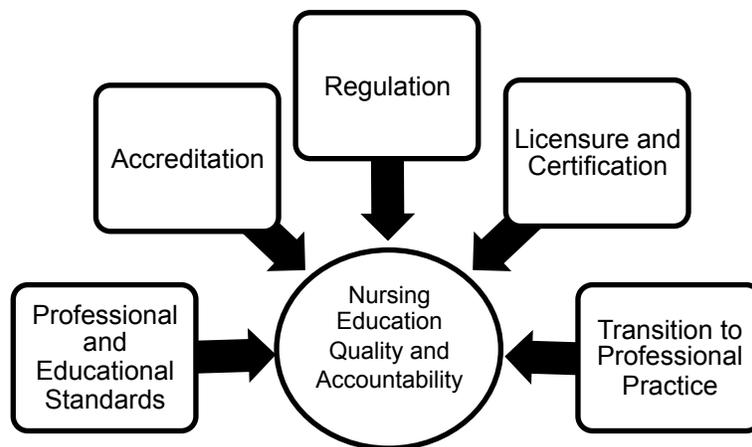
Preparing nursing students for practice is a major challenge for nursing educators. Preparing students with the skills of a nurse has been the focus for many years but we know that new nurses struggle with other aspects of practice. Nursing programs have increasingly moving toward helping students with better assessment, prioritization, clinical reasoning and decision-making skills. These are the skills that help new nurses adjust to clinical practice.

There are many measures that the profession has developed to help retain new graduates in the profession. More prolonged orientation periods and nursing residencies have helped employers improve retention rates and reduce turnover.

EDUCATIONAL ACCOUNTABILITY

Nursing uses an integrated approach to ensure accountability. Figure 1 (Johnson and Pintz, 2013) depicts the measures used by the nursing profession to promote new nurse readiness for practice.

Figure 1. Elements that influence the nursing education program evaluation process.



While nursing curricula are not prescribed, an examination of nursing curricula across the country would show similarities in the content. Nursing schools use national standards to develop their programs of study. Accreditation organizations require certain standards as part of the accreditation process. For example, all nursing schools must prepare nurses to deliver care that incorporates knowledge of patient safety practices and quality improvement. Nursing practice is regulated through boards of nursing which dictate practice parameters. Nurses entering the profession must take a licensure examination and must be licensed in the state where they practice or if the state participates in the nursing compact, licensed in a compact state. Since studies have found that nurses graduating from nursing schools are not always prepared to function as an experienced nurse, hospitals have developed orientation and residency programs for new nurses to help them transition to practice.

EDUCATIONAL STANDARDS

Nursing has adopted educational standards to ensure that nurses are prepared for practice with similar knowledge, skills and abilities. Some of these standards cover direct patient care skills, and others are broader and encompass knowledge about basic science, the health care delivery system, patient advocacy and healthcare research knowledge. These standards ensure that entry-level nurses have a consistent knowledge base and are prepared to provide care and be accountable to the public.

The American Association of Colleges of Nursing publish standards for three degree levels (bachelor's, master's and doctoral) which are referred to as the Essential's Series (<http://www.aacn.nche.edu/education-resources/essential-series>). The Essentials of Baccalaureate Education for Professional Nursing Practice (The BSN Essentials) are a set of nine standards that guide the development of curriculum for entry-level nurses within Bachelor of Science in nursing (BSN) programs. The BSN Essentials were developed through an iterative process so that recommendations from important stakeholders, such as the Institute of Medicine, include the core knowledge required of all healthcare professionals. The BSN Essentials incorporate concepts such as patient centered care, interprofessional teams, evidence based practice, quality improvement, patient safety, informatics, clinical reasoning/critical thinking, genetics and genomics, cultural sensitivity, professionalism, and practice across the lifespan (AACN, 2011). The BSN Essentials delineate the expected outcomes for entry-level nursing graduates. The BSN Essentials are depicted in Table 1.

Table 1: AACN Baccalaureate Essentials

Essential	Rationale
Essential I: Liberal Education for Baccalaureate Generalist Nursing Practice	<ul style="list-style-type: none"> • A solid base in liberal education provides the cornerstone for the practice and education of nurses.
Essential II: Basic Organizational and Systems Leadership for Quality Care and Patient Safety	<ul style="list-style-type: none"> • Knowledge and skills in leadership, quality improvement, and patient safety are necessary to provide high quality health care.
Essential III: Scholarship for Evidence Based Practice	<ul style="list-style-type: none"> • Professional nursing practice is grounded in the translation of current evidence into one's practice.
Essential IV: Information Management and Application of Patient Care Technology	<ul style="list-style-type: none"> • Knowledge and skills in information management and patient care technology are critical in the delivery of quality patient care.
Essential V: Health Care Policy, Finance, and Regulatory Environments	<ul style="list-style-type: none"> • Healthcare policies, including financial and regulatory, directly and indirectly influence the nature and functioning of the healthcare system and thereby are important considerations in professional nursing practice.
Essential VI: Interprofessional Communication and Collaboration for Improving Patient Health Outcomes	<ul style="list-style-type: none"> • Communication and collaboration among healthcare professionals are critical to delivering high quality and safe patient care.

Essential VII: Clinical Prevention and Population Health	<ul style="list-style-type: none"> Health promotion and disease prevention at the individual and population level are necessary to improve population health and are important components of baccalaureate generalist nursing practice.
Essential VIII: Professionalism and Professional Values	<ul style="list-style-type: none"> Professionalism and the inherent values of altruism, autonomy, human dignity, integrity, and social justice are fundamental to the discipline of nursing.
Essential IX: Baccalaureate Generalist Nursing Practice	<ul style="list-style-type: none"> The baccalaureate graduate nurse is prepared to practice with patients, including individuals, families, groups, communities, and populations across the lifespan and across the continuum of healthcare environments. The baccalaureate graduate understands and respects the variations of care, the increased complexity, and the increased use of healthcare resources inherent in caring for patients.

Adapted from The Essentials of Baccalaureate Education for Professional Nursing Practice (AACN, 2011).

The BSN Essentials provide a guideline for nursing faculty to develop curricula that incorporates these standards. Each essential provides a rationale, outcomes and sample content to assist faculty in developing and aligning their courses with each standard. Faculty often use curriculum mapping to document the alignment of the curriculum and The BSN Essentials. The Commission on Collegiate Nurse Education, one of nursing's accrediting bodies, requires evidence of the incorporation of The BSN Essentials as part of the accreditation standards (CCNE, 2015)

Nursing faculty may choose to incorporate other standards into the design of nursing curriculum besides the BSN Essentials. Schools may decide that other standards are consistent with the school's mission. For example, many schools use the Quality and Safety Education in Nursing (QSEN) curriculum standards, designed to improve healthcare quality and patient safety (QSEN, 2015). The QSEN project developed competencies to prepare nurses with the knowledge, skills, and attitudes (KSAs) to incorporate quality and patient safety standards their practice (Cronenwett, et al., 2007). A nursing school may decide that an overarching thread of their curriculum would be patient safety and quality improvement. They may wish to thread these concepts into all the courses in their curriculum. To incorporate this thread, they may adopt the QSEN competencies (patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics) into the coursework and include these competencies are part of the program outcomes.

EDUCATIONAL STRATEGIES

Fostering Critical Thinking

Critical thinking ability is key to making informed clinical decisions. Recognizing the need to better equip nurses with the clinical reasoning abilities needed for practice, nursing has moved its educational focus to critical thinking/clinical reasoning rather than just skill development. While clinical skills such as starting IVs and changing dressings are important to the provision of patient care, the more important competency for new nurses is the ability to assess a clinical situation and understand how to act upon the situation based on the patient's condition and other clinical

data. While nursing practice experience will eventually help the new nurse make better and informed decisions, the complexity of the patient care environment requires nurses to develop these skills prior to graduation. It is important that nursing students develop these skills before they are responsible for caring for patients. Developing the ability to critically think and reason will lead to the better decisions and reduce errors.

Moving to active rather than passive methods of teaching helps students develop mastery, acquire component skills, and allows them to practice integrating those skills and to apply what they have learned. "Goal-directed practice coupled with targeted feedback by faculty enhances the quality of students' learning (Ambrose, Bridges, Lovett, DiPietro and Norman, 2010, p. 5)." Nursing schools often use active learning approaches to help students develop the metacognitive skills they need in order to effectively practice as nurses.

One active learning approach used to help students learn about practice in a classroom environment is problem-based learning (PBL). PBL is an approach that puts students into real world situations and through support, questioning and self directed activities, students solve problems that mimic the skills they need for practice. Typically, PBL involves the use of case studies to create clinical situations where students must use the same clinical reasoning and decision-making skills they would use in an actual practice setting. The case studies can be formulated with varying levels of complexity so that students at different levels of expertise can learn about managing patients with all sorts of health conditions. Contextual elements can be added to help students consider how these elements affect care in different situations. For example, changing aspects of the patient's background such as socioeconomic status (social determinants of health), educational level (health literacy) and health status (co-morbidities) will have an impact on the management of the patient. Cases can target areas where students may be deficient and may help to model good patient care before the patient works with real patients. This helps keep patients safe.

Simulation is another learning strategy that employs active learning similar to case studies. However, simulation adds an additional element of reality by creating situations where students actually act on a situation that has been developed to mimic real world patient care. Simulation has traditionally been used for teaching particular nursing skills, such as administering injections. Moving to activities that are scenario based rather than just demonstrating psychomotor skills helps students integrate their learning and promotes the skills that make them better practitioners.

Another educational strategy that helps students integrate and synthesize information are projects. Projects are learner centered and often self directed. They allow students to apply knowledge to answer questions and solve real-world problems (Krajcik & Blumenfeld, 2006; Markham, Larmer, & Ravitz, 2003). For example, students in a nursing class might be required to develop a care plan for a hypothetical patient. The student would need to develop an understanding of the patient's diagnosis and treatment. They could search the literature to find evidence based practice interventions for the patient. They would have to consider other factors affecting the patient's care, such as living situation, socioeconomic factors, culture and co-morbid conditions. Projects could be completed by an individual student or with groups of students. All these iterations allow for other aspects of learning to occur. Helping students to become self-directed learners helps them to learn metacognitive insights so that they are able to observe and refine learning. This helps nursing students to become reflective, life-long learners. (Ambrose, Bridges, Lovett, DiPietro and Norman, 2010).

Nurses have developed a concept-based approach to nursing curriculum as an alternative to traditional nursing education. Traditional nursing education is very content heavy making it difficult for nursing students to retain and apply the information. Concept-based curriculum provides a framework to teach nursing where concepts rather than content can be applied across patient settings, age groups, and the health and illness spectrum (Giddens, 2007). So rather than using a systems approach, studying cardiovascular conditions and the treatment of those conditions, faculty could teach students about the concept of inflammation and its impact on many health conditions. The concepts selected provide an organizational framework for the curriculum and allows faculty to link concepts to different patient types and settings for patient care, helping students to integrate knowledge. Concept-based curriculum is learner centered and relies on active learning activities (Giddens, 2007). This assists students in making connections

and organizes knowledge so they can apply what they know (Ambrose, Bridges, Lovett, DiPietro and Norman, 2010).

Immersion through Simulation

Simulation within health professional education is growing to meet a number of needs within health care. Nursing has turned to simulation for many reasons:

- to assess achievement of clinical competencies
- to standardize educational experiences for students
- to replace clinical sites and experiences

According to the Society for Simulation in Healthcare (2015), “simulation is the imitation or representation of one act or system by another (Para. 1).” In nursing education, simulation is used to replicate the nursing practice environment so nursing students can practice skills in a way that prevents harm to patients and provides nursing faculty with an opportunity to give feedback on the student’s performance. “Simulation is a technique, not a technology, to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion” (Gaba, 2004, p. i2). The Institute of Medicine’s report on nursing work environments recommends simulation as a method to support nurses in the ongoing acquisition of knowledge and skills (Page, 2004).

Simulation prepares students for practice by allowing them to spend sufficient time practicing the skills they will need after graduation. It helps to ensure readiness for practice because assessments can be made of students performing clinical skills, with the opportunity for feedback and remediation in a “safe” setting without the real world consequences. In the past, students were assessed on the knowledge of clinical practice through didactic testing and observation in clinical settings. Objective testing focuses on didactic knowledge rather than demonstration of clinical practice. Observation in clinical settings did not always provide an opportunity for students to obtain or demonstrate all skills needed to perform well as a nurse. Clinical settings did not always offer all of the different patient diagnoses, patient types and situations for the student to learn about the full breadth of nursing care. In addition, students were often not permitted to function independently because of the concern for patient safety. This means that the student might only observe or be supervised closely, which did not allow for the development of prioritization, reasoning and decision making skills (Theisen, J and Sandau, K E, 2013).

Clinical simulation can be used in a number of ways. Students may be able to learn and then demonstrate their ability to perform clinical procedures such as dressing changes, giving injections and starting intravenous drips. Simulation is often used to help students learn clinical reasoning and decision-making. Clinical scenarios can be developed where the student will need to assess the patient’s status, respond in a critical situation or perform a high level intervention, like a code blue. A recent study, sponsored by the National Council of State Boards of Nursing, found that students who had had some of their clinical hours replaced by simulation performed no differently on several important learning outcomes than students who had traditional clinical experiences. These include NCLEX-RN® scores, preceptor competence ratings and employer ratings of clinical competence and readiness for practice (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014).

Preparing for Practice

Nursing programs often have a final course, sometimes referred to as a capstone course. This course helps to prepare students for nursing practice. Within the course, the student works with an experienced nurse and follows the nurse’s schedule to get an introduction to real world practice. The student gains experience working an entire shift with a full load of patients. The student will also learn about working weekend, evening or night shifts. In addition, they learn about important skills that nurses must develop such as prioritization, time management and delegation. In addition, they may also have immersive simulation experiences where they work

with other students to care for a simulated set of patients on a nursing unit. Various scenarios can be implemented and typical nursing unit problems can be introduced to help students develop their ability to think through and solve real world problems. Nurses often need to juggle multiple patients, interact with physicians and other health professionals and dealing with emergencies. Getting used to these multiples demands are difficult for new nurses. Scenarios that mimic the real practice environment help students prepare for practice.

Nursing programs use formative and summative evaluations. Nursing programs can conduct formative evaluations so that students who are struggling can be identified and programs can fine-tune the educational strategies. Many schools use standardized testing that help (HESI, Kaplan, ATI specialty and exit exams) predict student performance on the NCLEX-RN® licensing examination. Nursing programs conduct summative evaluations to determine program effectiveness. Some of the outcomes that many nursing programs monitor are RN licensing exam (NCLEX-RN ®) pass rates, graduation rates, employment rates, graduate exit surveys, employer surveys/feedback, and alumni surveys.

TRANSITION TO PRACTICE

To be able to practice in the current health care system, newly licensed nurses need support and guidance to make the leap from student to professional nurse. Preparing newly licensed nurses to transition to practice successfully can have a big impact on patient care and on a hospital's bottom line. New nurses are more likely to make medical errors than experienced nurses (NCSBN, 2015). Approximately 17% of new nurses leave a position within their first year of practice (Spector, et al, 2015). Higher turnover can have an impact on patient safety and patient outcomes (NCSBN, 2015). Hospitals invest a lot in new nurses' recruitment and orientation so preparing new nurses for practice is vital.

New nurses need to know how to care for sicker patients in complex health settings. The American Organization of Nurse Executive (2010) developed guiding principles for transition to practice. They identified six dimensions for the transition of a new nurse, which consist of clinical reasoning, technical skills acquisition, shaping emotional intelligence, socialization, professional engagement and on-going continuing education. These dimensions help the new graduate to develop the knowledge, self-efficacy and competency for practice (AONE, 2010). Successful transition programs include the following characteristics: clinically experienced nurses who are trained as preceptors and who are interested mentoring new nurses, structured transition program, a supportive working environment, new nurse retention programs, a relationship with an with academic programs for academic progression and no lateral violence (AONE, 2010).

The National Council for State Boards of Nursing (NCSBN) is conducting a study to examine the issues of orienting and retaining new nurses based on the need for best practices in new nurse transition programs. Along with 35 nursing organizations, a model of nurse transition was developed. A Transition to Practice Toolkit was developed based on these principles and is available to the public. Elements of the toolkit include: patient centered care, teamwork and communication, evidence based practice, quality improvement, and informatics and geared toward the new nurse and the preceptor. These learning modules can be used by transition programs and are aligned with the nurse transition model (NCSBN, 2015). One module focuses on patient centered care and includes a module on effective communication. This module focuses on improving aspects of communication, such as informing patients of their rights, or letting the patient care team know about special needs of a patient (The Joint Commission, 2010).

The NCSBN study is being conducted in 2 phases. The first phase studied transition to practice in hospital settings. Spector and colleagues (2015) found that better outcomes were associated with transition programs that included a formal orientation program that had institutional support, was 9 to 12 months long, included content on patient-centered care, informatics, patient safety, communication and teamwork, evidence based practice, quality improvement, reflection and feedback, new nurses were given time to apply content to practice, received feedback on their performance from their preceptor, reflected on their experiences, preceptors and new nurses developed a positive relationship, and those working in specialty areas had customized programs. These outcomes consisted of self-reports of competence by

new nurse and preceptor, self-reports of errors, use of safety practices, stress, job satisfaction and retention.

Challenges to Program Evaluation

Nursing programs struggle to measure program effectiveness. Accrediting bodies and the Department of Education require that nursing programs report specific outcomes such as NCLEX pass rates and graduation rates. Additionally, accreditors require schools to measure and demonstrate student learning. Other stakeholders such as the hospitals that employ new nurses expect clinical competence in graduates. Determining program effectiveness is challenging since there are no standard measures of clinical competence. Yet, more and more, schools are struggling to develop evaluation processes that assess program performance and ensure continuous quality improvement.

An important aspect of nursing education is clinical experience. Nursing schools struggle to determine how much clinical experience nursing students need to be ready for practice when they graduate. Is it a question of number of hours, or the type of clinical hours? Will they learn more in the simulation lab, on a nursing unit or a combination of both? Increasingly, nursing faculty are suggesting that nursing competencies be developed so that students can demonstrate their ability to achieve them. But, how do we develop competencies for complex cognitive and psychomotor skills? Moreover, how do we link educational preparation to clinical performance after graduation? These are questions the nursing profession will need to address in the coming years.

In 2010, The Carnegie Foundation for the Advancement of Teaching sponsored a study examining nursing education. Benner and colleagues (2010) studied nursing education across the country and made recommendations for improving nursing education at the program level. These recommendations fell into six categories: entry and pathways, student population, student experience, teaching, entry into practice and national oversight. One recommendation advocated for requiring performance assessments for licensure. Another called for more support for nursing educators to learn and use teaching methodologies that help students improve their clinical performance. In addition, they recommended improving the work environment for staff nurses and helping them learn to teach so they are better prepared to work with nursing students and new graduates.

While nursing still grapples with ways to prepare nursing program graduates for their new roles as registered nurses, many processes currently exist to ensure that happens. As a practice profession that is accountable to the public, nursing will continue to refine the methods used to assess clinical competence in new graduate nurses.

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