A Crisis in Competency: The Strategic and Ethical Imperative to Assessing New Graduate Nurses' Clinical Reasoning

Joan M. Kavanagh and Christine Szweda

Abstract

AIM The aim of the study was to assess entry-level competency and practice readiness of newly graduated nurses.
BACKGROUND Literature on success of new graduates focuses primarily on National Council of State Boards of Nursing Licensure Examination (NCLEX-RN) pass rates, creating a false and incomplete picture of practice readiness.
METHOD Posthire and prestart Performance-Based Development System assessments were administered to more than 5,000 newly graduated nurses at a large midwestern academic medical center between July 2010 and July 2015.
RESULTS Aggregate baseline data indicate that only 23 percent of newly graduated nurses demonstrate entry-level competencies and practice readiness.
CONCLUSION New data suggest that we are losing ground in the quest for entry-level competency. Graduates often are underprepared to operate in the complex field of professional practice where increased patient acuity and decreased length of stay, coupled with a lack of deep learning in our academic nursing programs, have exacerbated a crisis in competency.

KEY WORDS Nursing Education – Preparation-to-Practice Gap – Transition to Practice – Performance-Based Development System (PBDS) – Entry-Level Competency

In this time of unprecedented change in health care, delivering on the promise of safe, high quality patient care requires a highly engaged and competent team. The strategic and ethical imperative to ensure a competent, compassionate workforce consistently delivering highly reliable health care is paramount. Nurses play a critical role in the success of patient experience and positive patient outcomes. However, the widening preparation-to-practice gap challenges the ability of health care systems to deliver consistent, safe, quality care. In increasingly complex clinical settings, the consistent performance of nurses and all health care professionals is essential for patient safety (Disch et al., 2016; Weick & Sutcliffe, 2001).

The phenomenon of preparing to enter a high-stakes, fast-paced, health care practice — a profession where patient suffering, vulnerability, and even death can occur — is a sobering actuality. Knowledge development in clinical practice requires experiential teaching and learning through facilitated, situated cognition with reflection. Students, faculty, academic leaders, and service providers all share ownership in the success or failure of our new graduate nurses and their ability to develop a safe, effective practice.

With an understandable focus on pass rates of the publicly reported National Council of State Boards of Nursing Licensure Examination (NCLEX-RN), many nursing programs are graduating clinicians who successfully complete the state board licensing examination but are underprepared to operate in the complex field of professional practice (Benner, 2015b). To prepare the next generation of nurses to flourish in the intricate world of constant and sometimes discontinuous health care change, health care leaders in academia and service must work together to answer the call for radical transformation in education.

About the Authors *Joan M. Kavanagh, MSN, RN, NEA-BC, is the associate chief nurse of nursing education and professional development, Cleveland Clinic Foundation, Cleveland, Ohio. Christine Szweda, MS, BSN, RN, is the senior director, operations of nursing education and professional development, Cleveland Clinic Foundation. For more information, contact Joan Kavanagh at kavanaj@ccf.org.*
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BACKGROUND

Deans and directors of academic programs are committed to graduating students capable of providing safe, competent care and rely upon preadmission psychometric testing that they hope will predict success. Today, a simplistic definition of success is NCLEX-RN pass rates. Benner, Sutphen, Leonard, and Day (2010) urge academics to think beyond NCLEX-RN pass rates as an endpoint and look to practice readiness focused equally on knowledge acquisition and situated knowledge use, and clinical reasoning as the desired outcomes.

An entire industry has developed based on the assessment of student suitability for program admission, formative in-program progress, and predictive post-program success. Most nursing programs utilize a comprehensive, commercially available achievement test to gauge students' progress and readiness, but ultimately the standardized assessments do not measure a student's understanding of safe patient care or ability to apply knowledge (Benner, 2015a). Therefore, Benner et al. (2010) challenged us to measure what matters most and called for bold and much-needed performance assessment requirements for licensure in the form of knowledge application.

Benner et al. (2010) recommended that the National Council of State Boards of Nursing develop performance assessments for licensure and that performance evaluations be included during the academic program, at the time of the NCLEX-RN exam, and at the end of the first year of residency. In addition, they urged academic

educators to vary assessments, both formative and summative, and move beyond the focus on multiple-choice NCLEX-type questions. This call for local and national action has resulted in significant improvements to the NCLEX-RN exam itself; however, an objective evaluation of clinical performance, such as an Objective Structured Clinical Exam, has not been added as a national standard.

Current State and Preparation-to-Practice Gap

The comprehensive Essentials in Baccalaureate Education (American Association of Colleges of Nursing, 2008) identified critical thinking and clinical judgment as required skills for practicing nurses. However, new graduates are entering the profession without the necessary confidence and clinical judgment to move from concept to application (Benner et al., 2010). Moreover, the preparation-to-practice gap or lack of practice readiness of new graduate nurses is exacerbated by increasing patient acuity and decreasing length of stay (LOS) in the acute care setting. No longer does a nurse have days to develop sound clinical judgment by "knowing the patient" and his or her typical response to a procedure or medication (Porter-O'Grady & Malloch, 2011; Tanner, 2006). Today, patient LOS is compressed, which decreases the amount of time a caregiver has to notice changes in a patient's condition or to detect early warning signs of impending problems. The cumulative impact of increased patient acuity and truncated LOS significantly changes the face of the health care delivery system and, concomitantly, alters the demands of safe practice.

Magnifying these complexities are the rapid pace of change, the speed of innovation, technological advances, and an explosion of data. The failure to fail nursing students who do not demonstrate satisfactory progression also contributes to the widening and unacceptable preparation-to-practice gap (Docherty & Dieckmann, 2015). The gap is further exacerbated by faculty who have not maintained clinical competency or awareness of the implications and speed of health care reform.

Despite the 1999 Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System*, preventable health care errors in hospitals currently constitute the third leading cause of death in the United States (Makary & Daniel 2016). Eraut (1994) notes that most professional schools do not adequately teach students to use knowledge in actual practice situations. Both in higher education in general and in nursing education in particular, there is a call for deeper learning that stimulates the use of clinical knowledge in actual practice situations (Benner et al., 2010; Sullivan & Rosin, 2008).

To address the high turnover rate in entry-level professional positions, Chandler (2012) used an appreciative inquiry approach to explore the transition from student to professional nurse and identified the need for effective mentoring support and resources for new graduates. Health care systems must own the responsibility for assisting and guiding new graduates as they navigate the complexities of health care and the care environment and should provide guidance for what Benner, Hooper-Kyriakidis, and Stannard (2013) call local knowledge. Graduates will still need assistance to understand the culture, styles, and levels of practice and the policies and procedures of the workplace.

Although hospital educators must also be sufficiently facile in coaching, guided facilitation, and adult learning theories, the trajectory of this crisis in competency begins far before graduation and entry into practice. In undergraduate programs, higher education administrations find themselves less than nimble in their abilities to respond to the changing landscape of health care and the changing learner while faced with mounting challenges such as state cutbacks, aging faculty, and competition for clinic sites.

Impact of the Information Explosion

Kohn (2012) explains that 90 percent of the world's data have been created in the last two years. We now live in an age where the amount of existing information exceeds our capacity to assimilate it (Porter-O'Grady & Malloch, 2011). Huston (2013) posits that knowledge in the nursing profession doubles every six years so nurses must become knowledge brokers and embrace continuous lifelong learning. Tanner (2007) describes the challenge of information overload and claims that, in an effort to be comprehensive, textbooks and curricula have grown unchecked, exacerbating the epidemic of what some refer to as *infobesity*.

Adrift in a sea of information, there are new graduates who report that despite considerable academic achievements, they find themselves unable to use knowledge in unstructured, unprompted situations. Clearly, a content-laden curriculum does not solve the problem but exacerbates the information overload. Transformational and forward-thinking education for both academic success and practice readiness requires careful selection of the most essential teaching and learning materials and experiences. Contemporary pedagogy must evolve or become irrelevant. Perhaps it already has. Benner (2011) pronounces nursing textbooks as unwieldy encyclopedic compendiums of information that have become pedagogically tone-deaf, focusing primarily on knowledge acquisition and essentially overlooking knowledge use or application.

Historically, Dewey (as cited in Adair-Breault & Breault, 2014) cautioned about the dangers of simple recall over critical thinking and of listening and memorizing versus deep, substantive learning. In Deweyan terms, we need to focus on experiential, meaningful learning, so nursing students leave school able to apply knowledge in practice. Everything around us is changing, or, as Porter-O'Grady (2013) shares, "Change is." We need excellent nurses steeped in the understanding of problem solving and advocacy. Central to this formation is the development of professional nurses committed to leveraging system resources, lifelong learning, and patient safety. If service providers and academia are to meet the challenge of upgrading and transforming nursing education posed by the Carnegie Foundation Preparation for the Professions Program (Benner et al., 2010), the IOM (2011) report on the future of nursing, Quality, Safety and Education in Nursing (Cronenwett et al., 2007), and the Lancet Commission (Frenk et al., 2010), we must own the success or failure of our new graduates.

METHOD

Design and Setting

Identifying and addressing challenges to safe practice early in the onboarding process was paramount for patient safety at a large midwestern academic health system. The institution hires more than 1,000 newly licensed nurse graduates annually, and the transition to practice from academia is intellectually, physically, and emotionally challenging, leaving new graduates feeling at times overwhelmed and underprepared. Likewise, ensuring patients that their care will be provided by a competent workforce is a moral and ethical responsibility. Given the wide variability in baccalaureate and associate degree programs and the lack of contextual learning, it is

difficult to determine how to craft the most meaningful, cost-effective, and efficacious orientation or residency to adequately prepare the most proficient nursing staff.

Extant literature suggests that the goal of safe, quality patient care can best be accomplished by assessing individual learners, crafting a developmental program that supports new graduate success and patient safety, and provides the appropriate opportunities for new nurses to learn and grow. We know that many new graduates have difficulty putting together the pieces of clinical data, pertinent patient presentation, and health care knowledge and then applying this knowledge. Thus, the purpose of this research project was to quantify the preparation-to-practice gap, guide the creation of a residency program tailored to the specific learning needs of our new graduates, and increase speed to competency.

In July 2010, the Performance-Based Development System (PBDS©) was introduced to the onboarding process for registered nurses. PBDS is not used to influence hiring decisions; rather, it is used to acknowledge and respect that new graduates come prepared with a wealth of knowledge, yet limited ability to apply that knowledge. The IOM (2001) indicated that key aspects of critical thinking and clinical judgment, such as problem recognition, differentiation of priority, and level of urgency, are essential to safe patient care, but critical thinking and clinical judgment alone are not sufficient without critical action. "In a practice, the point of life-saving and life-preserving knowledge is the ability to use it, in every way and at the moment it is needed, not simply to have it" (Benner et al., 2013, p. 525).

PBDS is a web-based competency assessment tool created in 1985 by Dr. Dorothy Del Bueno and currently utilized by more than 500 hospitals in the United States. The assessment (www.pmsi-pbds.com) is designed to identify critical thinking learning needs, provide insight into the thought processes of the nurse, and assist in the development of an individualized orientation action plan to prepare each nurse for safe clinical practice. PBDS uses a combination of video vignettes and narrative clinical situations to evaluate various competencies associated with clinical judgment. These encompass patient problem recognition and management of the patient problem, which includes identifying the nursing interventions, information to be communicated to the physician, and orders to be anticipated from the licensed independent provider. Additional competencies include differentiation of urgency and provision of rationale for nursing actions (see Table 1). There are no multiple-choice questions, and all scenarios require a free-text response from the nurse.

All new graduate nurses receive an assessment that is reflective of common medical-surgical patient problems and complications. The assessment takes an average of 3.5 hours to complete, and each segment is individually timed; verbal and written instructions are provided. The scenario segments are accompanied by written materials providing the patient history and all clinical and laboratory data presented in the video. This allows the nurse to concentrate on observing the unfolding scenario without the need to take notes on patient information. An RN proctor is available at all times for questions during the assessment period.

Responses to PBDS assessments are externally rated by the vendor, Performance Management Services, Inc. Completed assessments are accessed and reviewed by raters employed by the vendor, and a summary of the results is provided within five business days. Raters utilize model answers customized to each organization's standards and evidence-based practices. Innerrater reliability is assured.

Table 1: Key Areas of PBDS Competency Assessment

Problem/urgency identification focus:
• **Problem/risk identification**
• **Relative priority — urgency**
• **Justification for actions**
Problem management focus:
• **Identification of independent nursing interventions**
• **Communication of essential information to LIPs**
• **Anticipation of appropriate medical orders**
• **Justification for actions**

Respondents are provided individualized summary ratings scored on a continuum from unsafe practice to safe/acceptable practice. The unsafe range is further differentiated into two categories: a) Respondent unable to recognize a change in patient condition or level or urgency most of the time. b) Respondent able to recognize change in patient condition and level of urgency most of the time, but unable to manage the problem in its entirety. A comprehensive summary of these data includes key recommendations for respondents and their unit-based coach/preceptors to address during orientation to assist in developing a safe, acceptable practice.

Data Collection

Demographic data, required before the PBDS rater provides the completed summary, are collected and entered into the PBDS Navigator (website). These data include name, hospital, clinical unit, school of nursing, nursing degree, and any previous nursing experience (e.g., worked as LPN). Assessment summaries are accessed from the PBDS Navigator, and aggregate data are exported into a spreadsheet. Names and clinical units are removed prior to sharing any aggregate data. The actual verbatim typed responses are retained in the PBDS Navigator but not shared with the hospital system. Instead, raters share a summary of responses with the organization.

Reliability and validity of the PBDS have been reported in previous publications (Del Bueno, 1990, 1994, 2005). Reliability estimates for the clinical vignettes, obtained using an equivalence approach, averaged 94 percent for individuals tested in parallel situations (Del Bueno, 1990). Institutional review board approval was not obtained as deidentified data were reported in aggregate only.

RESULTS

Five years after initiating PBDS, more than 5,000 newly graduated and licensed RNs coming from more than 140 nursing programs in 21 states have been evaluated. Assessments are conducted posthire and prestart to ensure that the results can be reviewed before new graduates begin working with patients.

Strategic and ethical obligations, both in the name of patient safety and in support of new graduates' successes, have driven the need to develop a specific program for nurses who are unable to recognize a change in patient condition or level of urgency most of the time on their baseline assessment. These new nurses are placed in a supportive, immersive one-week experience to learn how to recognize changes in a patient's condition. The program further develops the nurse's ability to assess the bigger picture of patient history, patient presentation, and clinical data. With the development of clinical judgment, the urgency of a situation is recognized and appropriately escalated. The immersion program includes clinical experience, simulation, and facilitated discussion and has an almost 99 percent success rate in teaching new graduates patterns of critical thinking that will serve as guides to safe practice.

Del Bueno (2005) reported that aggregate national data from all hospitals using PBDS showed 35 percent of new graduates were scoring in the safe or acceptable range. From 2012 through 2015, aggregate data from hospitals using PBDS indicated an average of 28 percent of new graduates scored in the safe or acceptable range, indicating a dramatic decrease in new graduate ratings of "acceptable" (Performance Management Services, Inc., 2015). Data from our health care system over the past five years display an average of 23 percent of new graduate nurses in the acceptable "safe to practice independently" area of the continuum. The others were rated as unsafe to practice independently: 23 percent were unable to recognize a change in patient condition or level or urgency most of the time, and 54 percent were able to recognize a change in patient condition and level of urgency most of the time but unable to manage the problem in its entirety.

Consistent with Del Bueno's (2005) earlier findings, there was no difference in ratings between baccalaureate and associate degree graduates, regardless of the type of program (accelerated, bridge, or traditional). Our site-specific aggregated PBDS ratings for new nursing graduates from 2010 to 2015 are depicted in Table 2. The number of nurses scoring in the lowest category has remained relatively unchanged, with 23 percent unable to notice a change in a patient's condition or identify the urgency of a situation.

DISCUSSION

The sample population of more than 5,000 newly graduated nurses originates primarily from nursing programs in Ohio and is split evenly between AD and BSN programs. These findings have remained longitudinally consistent and suggest a need for a paradigm shift in the education of the next generation of health care professionals. Although current nursing curricula aim for the integration of knowledge, skills, and values, the outcomes of this study demonstrate a major gap between acquiring sufficient information to pass the NCLEX-RN compared to that which is necessary to practice safely and competently.

Benner (2009) suggests a future workforce should be prepared through curricula that integrate practice and activities with an increased focus on competencies and civic professionalism. In its landmark study on the future of nursing, the IOM (2011) proposes that the way nurses were educated in the past is not sufficient for the levels of acuity and complexity of health care in the 21st century. The IOM urges accrediting bodies to require that all nursing students demonstrate a comprehensive set of clinical performance competencies.

Limitations and Strengths

Inherent in standardized and passive assessments such as PBDS is an inability to collect information regarding a nurse's response to an unfolding patient scenario reflecting: a) the patient's response to the nurse's interventions and b) whether or not the nurse would alter the plan of care based on the patient's response. As the patient responds physiologically and emotionally to the nursing interventions, would the nurse alter the plan of care if the interventions were causing harm? For example, if the nurse encounters a patient with increased intracranial pressure and the nursing intervention chosen includes erringly placing the patient in Trendelenburg, would the new graduate notice changes in the patient's response and alter the care if the patient started to deteriorate?

In a time of nursing education evolution, data gleaned from PBDS assessments can serve to quantify and clarify the preparation-to-practice gap. In a data-driven world, PBDS assessment results can also serve as a catalyst for innovation that both academic and service providers can utilize to guide the transformation of nursing education. This innovation should focus on deep learning that helps our novice practitioners integrate knowledge acquisition with an understanding of how and when to use that knowledge.

PBDS assessment data have allowed this academic medical center to create an individualized orientation program and competency-based new-graduate residency. The data also allow the medical center to identify those individuals who are unable to recognize a change in a patient condition and urgency. Subsequently, an intensive, targeted teaching/learning strategy focused

Table 2: Site-Specific PBDS Ratings 2012–2015 ($N > 5{,}000$)

	Unacceptable (Unable to Demonstrate Problem and Urgency Recognition)	Unacceptable (Unable to Demonstrate Problem Management)	Acceptable
2011	24%	53%	23%
2012	23%	57%	20%
2013	22%	56%	22%
2014	24%	52%	24%
2015	23%	54%	23%

on developing these two areas is provided prior to the nurse being placed in the position of providing patient care. Potentially, this can serve to strengthen clinical inquiry and clinical imagination and ultimately promote patient safety and the consistent delivery of quality nursing care.

A strength of this study is the large sample size of greater than 5,000 new graduate nurses pulled from a large academic medical center collected over a five-year period. The data have remained consistent from year to year. A limitation remains that data were collected from a single academic medical center.

CONCLUSION AND RECOMMENDATIONS

After decades of calls for nursing education reform, pleas for curricular changes, and paradigms shifts, we continue to face only pockets of academic reform and academic-service partnerships. Ironside, McNelis, and Ebright (2014) suggest that the complex web of learning a nursing practice is often overshadowed by a continued focus, by both students and faculty, on tasks. Therefore, curricular changes that foster critical thinking skills and clinical reasoning and offer guided learning opportunities that facilitate the transfer of knowledge to practice are essential to promote positive transitions to the role of professional nurse.

A radical transformation in nursing education depends on robust, meaningful, academic-practice partnerships where colleagues share and relish the responsibility for developing our future nurses. Despite obvious differences in business models, speed, and approaches to problem solving, Granger et al. (2012) proffer that integrated academic-service partnerships can improve patient outcomes through improved evidence-based patient care. Given the importance of keeping our patients safe and supporting new graduates' successes, aggregate data from PBDS and school-specific PBDS results have been shared with our local academic colleagues since 2011. Although disappointed with the results, faculty have been grateful for the objective information.

Many nursing programs either were or are now in the process of curricular revisions, some to include performance evaluations, such as objective simulated clinical experiences (Objective Structured Clinical Exam), as part of the formative and summative evaluation of students. In addition, we have launched dedicated education units (DEUs) where our nurses serve as clinical instructors for accelerated BSN students from several local colleges. The number of DEU graduates hired at this health care system is relatively small at 37; but to date, it appears that the percentage of those graduates scoring in the acceptable range of PBDS is slightly higher (28 percent) than the non-DEU graduates (23 percent).

Although initial data suggest that DEUs can have a positive impact on graduate confidence and readiness for practice, there is equal support that Benner et al. (2010) are correct in suggesting that expert clinical staff nurses are no replacement for faculty who are clinically current. What is needed is an approach that transverses all forms of teaching, classroom, and simulation not exclusively focused on clinical practice. Interestingly, the number of DEU graduates scoring in the lowest domain of PBDS was unchanged between non-DEU and DEU students. Although this is not a resounding affirmation of the DEU given the resource intensity and capacity constraints hospitals face in providing expert clinical nurses to serve as primary clinical instructors, continued analysis is warranted.

Of all the far-reaching, rich, and diverse education reforms Benner et al. (2010) propose, the most salient is the call to develop pedagogies that keep students focused on the patient's experience. Perhaps concentrating on the patient experience will help our future nurses understand more fully what it means to be a nurse and will serve as a vehicle for critically reflected learning, integrating the complex array of psychosocial, physiological, and technical aspects that make up the highly demanding and richly rewarding profession of nursing. Viewing our practice through the lens of a patient's reality reminds us why we became a nurse: to deliver safe, compassionate, quality care. Fundamentally, the patient experience is grounded in the language of nursing and nursing theory, and that theory should provide the organizing framework for understanding the therapeutic and relational foundation of our profession.

As educators, we can never lose sight that the patient experience and patient outcomes are what defines and connects the essence of nursing education — be it academic or service. To facilitate deep learning, we must cultivate the marriage between classroom and clinical and provide case profiles representative of the high-volume, high-risk health challenges our patients present. Dealing with novel patient problems can be left to the domain of advanced beginner practice where one continues to develop clinical wisdom and experience, but undergraduate education in partnership with service needs to prepare our future caregivers to think critically, solve problems, and develop the foundation of safe practice and confidence, particularly in the most frequently presented health care challenges. Moving from a reductionist and fragmented trajectory of education to a collaborative partnership model could provide opportunities to leverage the strengths, differing perspectives, and resources of both service and academia to accomplish the shared mission of educating those who deliver safe, quality care (Benner, 2012).

As professionals, nurse educators have an obligation to be resolute in our commitment to change the paradigm of graduate nurse success by continuing to explore collaborative ways to ensure a competent workforce. Assessing, developing, and validating clinical competence must become a priority in the name of safeguarding our patients, improving patient outcomes, and mitigating preventable health care errors and never events.

Absent an ability to analyze this phenomenon, our next iteration of assessments will include research utilizing the Lasater Clinical Judgment Rubric (LCJR) in a high-fidelity simulation lab. The LCJR could be used to assess readiness for practice as demonstrated in clinical simulation (Victor-Chmil & Larew, 2013) and consists of a grading continuum similar to PBDS, rating novice nurses from Beginning to Exemplary. Utilizing Tanner's (2006) clinical judgment model, the LCJR categorizes four dimensions of clinical judgment as Noticing, Interpreting, Responding, and Reflecting. The study plan is to compare our new graduates' PBDS scores to the LCJR scores on similar simulated patient situations. Expert clinical instructors will be blinded to new graduates' PBDS scores and evaluate the new graduates' clinical judgments and clinical reasoning in six high-fidelity simulations. Data gleaned from this study will be available in 2017 and may enable us to craft, more precisely, a learning environment and subsequent learning situations that may accelerate new graduate time to competency but, more importantly, provide key data to ensure safe patient care.

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