

## Competency-based evaluation: Collaboration and consistency from academia to practice

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### ABSTRACT

Competency-based evaluation is not a new concept in nursing education. The Essentials: Core Competencies for Professional Nursing Education (AACN Essentials), published in 2021, and the NONPF Nurse practitioner Role Core Competencies (2022) have provided us with the most recent roadmap for curriculum development and student evaluation. Using these two national guidelines and the Standards for Quality Nurse practitioner Education (2022), we examined ways to unify curriculum and competency in clinical practice. Through a review of the available literature, the lack of standardization in evaluating competency in clinical practice was evident. A framework for evaluation was developed including concepts from other health care discipline competency models. This article presents the resulting evaluation of a tool across academia and practice. Clinical preceptors are an extension of the faculty and play a significant role in developing practice competencies in advanced practice nursing students. Providing preceptors with a comprehensive framework we derived from the already existing PRIME model, and which we use with simulated patients, allows for the evaluation of clinical competencies in a variety of clinical settings. Consistency of evaluation across settings assures the attainment of the competencies necessary to perform safely and effectively in the practice environment.

**Keywords:** Clinical competency; competency evaluation; nurse practitioner.

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### Introduction

Measuring competencies for advanced practice registered nurse (APRN) students in preparation for the workforce is challenging. Constant changes in the health care system make it hard for nurse educators to determine how APRN students attain and maintain the knowledge, skills, and abilities to practice safe and quality care across all settings. At the same time, nursing schools are responding to health care needs by increasing their capacity to prepare more students at the APRN level and foster a competency-based approach with the highest possible standards (AACN, 2021). Practice leaders and academic faculty wrestle with tough decisions on integrating clinical experiences into the nursing curriculum. Virtual patient scenarios and case studies narrow the

theory–practice gap by allowing students to apply knowledge through a simulated patient experience (Moore & Hawkins-Walsh, (2020). Classroom-to-practice learning is tested each time the student enters a clinical practicum, reinforcing the heightened need for teaching techniques and clinical evaluation tools to be consistent across all settings, from school to practice.

The need to secure preceptors is ubiquitous across nursing schools, medical and physician-assistant programs, and all clinical professionals who must ensure appropriate clinical experiences to meet the workforce's needs (AACN, 2021). Davis et al. (2021) discussed the challenge of creating sustainable clinical learning opportunities to address the challenge facing APRN education. The preceptors were involved in a longitudinal experience that included input into student placement and increased clarity of their responsibilities and that of the program faculty. The one area that was not improved, and has been a long-term challenge with clinical education, is the lack of support at the practice level. At the same time, meeting the needs of clinical preceptors through other means like free continuing education, adjunct faculty appointment, and formal recognition for

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career advancement is essential for optimizing APRN competency development (Renda et al. (2022). Cretu and Stilos (2021) stressed the importance of clinical placements for APRN students to develop competencies necessary for successful practice. Using evidence-based clinical practice guidelines helps to bridge the gap between clinical practice and academia (Karikari-Martin et al. (2021) described the establishment of academic service partnerships to increase the number of clinical placements for APRN students. The funded project through CMS provided financial support for practice sites to several levels of students, including PA and medical students who received priority placements. The competition for clinical sites often finds NP students lacking the critical hands-on education they need to be successful. Recruitment of preceptors involves increasing awareness of the role and establishing support from colleagues and administrators (DeClerk et al., 2022). Schools of Nursing require faculty to have a patient practice to maintain national certification and clinical competency. Faculty clinical practice can also support establishing partnerships that enhance APRN learning opportunities (Padilla and Evans-Krieder (2022).

### Problem statement

There is a need for a standardized approach to evaluating competency in clinical practice for APRN students. Unfortunately, no nationally recognized evaluation tools are available to ensure fidelity between academic and practice evaluations of nurse competencies in APRN students. Although professional organizations have established standards for APRN practice competencies, there remains no standardized evaluation method used to ensure consistency across preceptors, sites, and programs.

### Aim

The aim of this article is to use the AACN Essentials: Core Competencies for Professional Nursing Education (2021), the NONPF Nurse Practitioner Role Core Competencies (2022), and recommendations from the report of the National Task Force (NTF) on Quality Nurse Practitioner Education (2022) to make recommendations for standardization of clinical competency evaluations across academia and practice.

The AACN Essentials establish a structure for transitioning to competency-based education (The Essentials, 2021). The NONPF Nurse Practitioner Role Core Competencies stress the importance of knowledge acquired through mentored patient care experiences. The NTF (2022) outlines clinical experience expectations and the importance of consistency of preceptors as an extension of the faculty. Standardizing competencies allows multiple stakeholders, such as employers, learners, faculty, and the public, to have a shared understanding of their meaning, decreasing the ambiguity of the clinical

evaluation process. Nurse faculty and students find the clinical evaluation process challenging because it is highly subjective.

### Background

Precepted practice is integral to competency-based education for APRNs, where clinical skills are developed and evaluated. However, judgments regarding students' clinical performance can be challenging and subjective because performance is determined primarily by observations (Keilffer et al., 2021). In addition, clinical evaluation is different across programs, supporting the need for standardized clinical evaluation tools (Ayvazian et al., 2021). A standardized tool with a common language that measures clinical core competencies can help reduce the clinical evaluation challenges for faculty (Chan et al., 2020). Traditionally, tools designed by academic nursing faculty evaluated course learning and program objectives (Hodges et al., 2019). The publication of the Essentials and the NONPF Nurse Practitioner Role Core Competencies provides a framework for standardizing clinical evaluation. These roadmaps contribute to consistency in expectations between academia and the clinical setting. Because NP education embraces competency-based evaluation, aligning faculty and preceptor clinical expectations is essential (Roberts et al., 2020). The inconsistency of evaluation has heightened concern regarding graduate-level nurse preparation and measurement of clinical competence (Hodges et al., 2019). In addition, clinical preceptors have limited time to spend assessing and evaluating nursing students and view this function as an added burden rather than an opportunity to ensure nurses' competency (Roberts et al., 2020). Pitts et al. (2019) described using the NONPF/AANP Preceptor and Faculty Expectations checklist to enhance collaboration for student clinical education. The updated version of this checklist (NTF 2020) will be discussed as a guideline for ensuring appropriate clinical experiences to meet care competencies.

### Literature review

The review used the following databases: PubMed, Cochrane, and CINAHL Plus with Full Text. The literature search of keywords: AACN Essentials, APRN clinical competency, standardization/common language of core competency, and clinical evaluation between 2018 to 2022. This review explored current knowledge about NP clinical evaluation and frameworks for standardizing clinical evaluation tools for APRN education programs. The search yielded 55 articles on clinical competency and evaluation in advanced graduate-level nursing education. Inclusion criteria included those articles discussing competency for nurse practitioners and standardization across health care education. Standardization of medical education was included as aligned with NP core competencies.

### Clinical competency

Competency is multidimensional and dynamic, which changes with time, experience, and setting (Taylor et al., 2021). Competency-based education is becoming the standard for all doctoral-level health care professionals. Englander, et al. (2013) included the concepts of standardization, a prescribed trajectory of knowledge, and assessment tools based on the quality of care delivery evaluated through the direct observation of the learner. A competency-based system defines the outcomes desired at the end of the educational pathway (Ayvazian et al., 2021). There are several currently used methods for assessing competency in health care. Kesten and Beebe (2022) identified seven frameworks presently used to evaluate the competency of health care providers. This article, completed before the publication of the AACN (2021) and NONPF Nurse Practitioner Role Core competencies (2022), identified the previous version of these national organization recommendations as the best framework for NP competency evaluation.

Competency, by definition, is the ability to do something successfully or efficiently. Competency skills are objectively measured, enhanced, and improved through learning experiences. Nursing competency is a complex integration of knowledge, including professional judgments, skills, values, and attitudes (Moore & Hawkins 2020). Schumacher and Risco (2017) defined competency-based education as an outcomes-based approach applied to the design, implementation, assessment, and evaluation of students using an organized framework of competencies. All stress the importance of assessment, differential diagnosis formation, ordering and interpreting tests and therapeutic interventions, and providing education to patients and families.

AACN (2021) defines competency-based education as a process where students are held accountable for mastery of competencies necessary for their specific course of study. The advances in learning approaches and technology have allowed nursing education to move toward outcome-driven instruction and, ultimately, competency-based education. "This learning approach is linked to explicitly defined performance expectations, based on observable behavior, and required frequent assessment using diverse methodologies and formats" (AACN, 2021, pg 4). In addition, measuring clinical competencies is a core part of preparing students for the workforce. Consequently, the quality and quantity of clinical education predict students' ability to be successful so that the quality and quantity of the clinical experiences can support or compromise the student in future practice (Taylor et al., 2021).

### Common language for core competencies

Standardization creates a common language by decreasing ambiguity and promoting clarity. For example, if

there are variations in levels of skill and ability, having standardized core competencies will enable nurse educators to identify learning gaps in meeting core competencies. Nursing organizations are establishing consensus around core competencies. Multiple nursing specialty roles contribute to the variations in defining core competencies. Nurse residency programs, particularly those within the Department of Veteran's Affairs (VA), are developing care competencies that are achieved before completing postgraduate training (Ayvazian et al., 2021). Common evidence-based language is included in the evaluation process to assess the quality of students' clinical education and determine whether clinical learning outcomes are achieved (Chan et al., 2020).

Englander et al. (2013) identified core competencies in graduate medical education. In addition, the research examined other health care professions' competencies, including nursing, pharmacy, and physician assistants. The evaluation of competencies found that many areas "had either an exactly or closely matching competency" (Englander et al., 2013 pg 1090). Although health professions worldwide are shifting to competency-based education, there is still a lack of common taxonomy domains for competencies. Englander and his colleagues argued that if health professionals begin to use the exact words with the same meaning, they communicate more effectively and reduce misunderstandings about knowledge, skill, and ability. Therefore, developing a common language to assess and translate the evidence of clinical expectations is essential. Gutierrez-Aleman et al. (2021) found through a review of 14 studies that educational programs were influential in developing nursing knowledge, skills, and attitudes but did not evaluate the acquisition and implementation of clinical nursing competencies.

Sharing a common language between practice (the clinical preceptor) and academia (the clinical instructor) offers a bridge to a shared vision for nurse competency. Pitts, et al. (2019) advocated for standardization of the communication pathway for faculty, preceptors, and students. The importance of orientation for preceptors, specifically related to the course objectives, outcomes to be measured, and assessment methods promotes congruency of evaluation of students across academia and practice. Education for preceptors in this well-supported method can help overcome barriers to mentoring APRN students. Hall et al. (2021) described the challenges of competency-based medical education and tips for learners to adjust to this approach to clinical experience and evaluation. This shift to competencies has been difficult for students and preceptors. Students often lack knowledge of expectations and clinical education evaluation. Using a standardized method from academia to practice allows students, faculty, and preceptors to maintain consistency and ensure the achievement of competencies (Hodges et al., 2019).

The AACN essentials have created a framework for preparing and evaluating nursing competency from entry-level RN to advanced practice. APRN students have already achieved level one competency in their entry-level professional nursing education and build on them while in their advanced practice program. The core competencies for APRN education in the clinical setting are divided into six areas: assessment, diagnosis, plan treatment, evaluation, education/patient-centered care, and care coordination.

**Evaluation for clinical competence—objective structured clinical examinations, PRIME, and entrustable professional activities**

Objective structured clinical examinations (OSCEs) are an evaluation modality used to assess APRN students’ knowledge, skills, and abilities in the academic arena. This examination tests the student’s clinical competency with a nurse educator observing. Objective structured clinical examinations are conducted in a simulated clinical area with standardized patients to provide consistency for evaluation. Using standardized scenarios, case studies, and simulations allows students to perform specific skills,

interpret information, make clinical decisions, and communicate with patients and other team members (Hickey, 2021). Clinical skills are assessed in a series of simulated stations that may involve history collection, physical assessment, laboratory investigation, and treatment (Kieffer, et al, 2021). Simulated patient experiences are frequently used as a formative assessment for students and provide a common thread between academic evaluation and clinical competencies (Knopp et al., 2022).

Pangaro (1999) began looking at an advanced tool for evaluating clinical competencies. The RIME model (reporter, interpreter, manager, educator) was introduced to provide a more valid and reliable way to evaluate students in a clinical setting. D’Aoust et al. (2021) adapted this model, developed for medical education, to nursing with an additional emphasis on professionalism. The PRIME-NP model was developed to assess APRN students through OSCEs in the simulation environment and was adapted to create a proposed Clinical Evaluation Framework that will be piloted with DNP students (Figure 1). This framework allows for evaluating competencies across the continuum of the DNP clinical courses. Table 1 illustrates how the PRIME model can validate

**Student competency is based on the PRIME Model (Professionalism, Reporter, Interpreter, Manager, Educator/Evaluator)**

The evaluation of students is based on a modification of Benner’s stages of Clinical Competence.

<b>Professional – Demonstrates professional behavior. PreC – C5</b>				<b>Novice – Developing skills.</b>			
				<b>Advanced Beginner – Needs oversight from the preceptor</b>			
				<b>Competent – Assuming greater responsibility</b>			
				<b>Proficient – Recognizing more complex situations</b>			
				Novice	Adv. Beginner	Competent	Proficient
Displays Professional demeanor and attire	Yes	No					
Displays personal Insight and participates in self-directed learning	Yes	No					
Interacts appropriately with patient/caregiver	Yes	No					
Demonstrates respect for patient’s values	Yes	No					
<b>Reporter – Able to gather and present information about the patient</b>							
The student gathers information from the patient through strong interviewing skills.			PreC	C1	C2	C3-5	
The student performs a focused physical exam relative to the history and recognizes abnormal findings.			PreC	C1	C2	C3-5	
The student accurately conveys patient information through an organized oral presentation.			PreC	C1	C2	C3-5	
Student accurately documents in the patient record history and physical exam findings.			PreC	C1	C2	C3-5	
<b>Interpreter – Able to analyze and prioritize patient problems</b>							
The student can formulate a problem list for assigned patients.			PreC	C1	C1-2	C3-5	
The student develops differential diagnoses based on the patient’s history and physical exam.			PreC	C1	C1-2	C3-5	
The student can interpret basic ECGs and laboratory tests.			PreC	C1	C1-2	C3-5	
The student can interpret advanced diagnostic studies (radiology, specialized testing)			PreC	C1	C2	C3-5	
<b>Manager – Able to manage patient needs and coordinate with the health care team</b>							
The student can develop diagnostic and therapeutic plans for patients.			PreC	C1	C1-2	C3-5	
The student can verbalize the risks and benefits of the patient plan.			PreC	C1	C1-2	C3-5	
The student incorporates patient values and social determinates of health in care plan			PreC		C4	C5	
The student participates in interprofessional practice.			PreC	C1	C2	C3-5	
<b>Educator/Evaluator –Demonstrates Educator and Evaluator Qualities</b>							
The student educates the patient and caregiver regarding the management plan and expected outcomes.				C1	C2	C3-5	
The student uses appropriate communication and teaching methods					C1	C2-5	
The student shares learning with staff, patients, and caregivers.				C1	C2	C3-5	

PreC – preclinical courses – Health Assessment and Diagnostics and Procedures

C1-C5 – Progressive clinical courses over 5 semesters

**Figure 1.** Clinical evaluation framework—the figure provides an example of a competency-based evaluation using the PRIME model. This evaluation is leveled to evaluate progressive learning and competency acquisition.

**Table 1. Evaluation Strategy AACN Essentials/ NONPF Core Competencies and PRIME Model**

PRIME	AACN Essentials NONPF NP Role Core Competencies
P-Professionalism Appropriate demeanor, comportment, and attire for the clinical setting Punctual, reliable, responsible Respectful of patients' values Respectful toward staff and peers Team player	Professionalism Domain 1: knowledge of nursing practice (1.1) Knowledge of practice (1.1) Domain 2: person-centered care (2.1, 2.2, 2.6) Domain 9: professionalism/professional acumen (9.2, 9.3) Domain 10: personal, professional, and leadership development/personal and professional leadership (10.1,10.3)
R-Reporter (Assessment) Gathers and clearly communicates information obtained from history, physical examinations, and laboratory/diagnostic tests Strong interviewing skills Day-to-day reliability in conducting appropriate physical examinations clearly and concisely R-Reporter (documentation) Excellent documentation	Assessment Domain 1: Knowledge of nursing practice (1.2, 1.3) Knowledge of practice (1.2, 1.3) Domain 2: Person-centered care (2.3) Documentation Domain 8: Informatics and health care technologies (8.1) Technology and information literacy (8.1)
I-Interpreter (diagnosis) Interprets clinical information Creates differential diagnoses that are complete and comprehensive Describes rationale for working diagnosis Interprets basic and advanced diagnostic studies	Diagnosis Domain 2: Person-centered care (2.4)
M- manager (plan) Formulates diagnostic and therapeutic plan Effectively decides or explains risks and benefits M- manager (treatment) Appropriately orders basic and advanced procedures Proficient at basic and advanced procedures M- manager (education) Provides patient-centered care Solicits patient preferences Incorporates patient values in the plan of care	Plan Domain 2: person-centered care (2.5) Treatment Domain 2: person-centered care (2.5) Domain 7: systems-based practice/health systems (7.2) Education Domain 2: patient-centered care (2.8) Domain 8: informatics and health care technologies (8.2, 8.3)

**Table 1. Evaluation Strategy AACN Essentials/ NONPF Core Competencies and PRIME Model, continued**

PRIME	AACN Essentials NONPF NP Role Core Competencies
Addresses and incorporates social determinants of health in the plan of care Involves family members or designated support persons as appropriate M- manager (care coordination and interprofessional partnerships) Discusses collaborative/team-based care and practice based on best evidence or current clinical guidelines as appropriate With each case Referral/follow-up for specialty/ancillary care Transitions of care Management of complex cases Behavioral/mental health considerations	Care coordination and interprofessional partnerships Domain 2: patient-centered care (2.7) Domain 6: interprofessional partnerships/ interprofessional Collaboration in practice (6.1, 6.2, 6.3, 6.4) Domain 9: professionalism/professional acumen (9.5, 9.6)
Evaluation E-Educator evaluator Identifies anticipated response to treatment Provides self-reflection as to the next steps to faculty/preceptors Provides follow-up instructions Provides tailored education about components of treatment and testing with the rationale Provides appropriate referral instructions Uses appropriate communication and teaching methods (written materials, digital communication, community-based resources)	Evaluation Domain 2: person-centered care (2.6, 2.7) Domain 3: population health (3.2) Domain 4: scholarship for the nursing discipline/practice Scholarship and translational science (4.1, 4.2) Domain 8: informatics and health care technologies Technology and information literacy (8.2, 8.3, 8.4)
<p><i>The table aligns the specific Domains of the AACN Essentials and NONPF NP Core Competencies to the competency-based evaluations outlined in the PRIME model.</i></p>	

competencies outlined in the ANCC Essentials and NONPF NP Role Core Competencies. This evaluation strategy

supports the acquisition of competency to progress toward independent practice.

Evaluating students in clinical practice is universally required across all providers caring for patients, including medicine, surgery, pharmacy, physical and occupational therapy, and nursing. The utilization of Entrustable Professional Activities (EPA) is standardized across most medically related professions and is taking hold most recently in NP education. Anthammatten et al. (2020) reviewed the EPAs used in medical education, explicitly comparing them with the NONPF NP competencies published in 2017. This comparison showed significant overlap and matched curricular milestones within an FNP program. The utilization of EPAs during simulation activities and with clinical preceptor evaluations allows faculty to determine student NP readiness to practice (Keating et al., 2021). Moore and Hawkins-Walsh (2020) mapped six EPAs to NONPF Core Competencies and AACN APRN Doctoral level competencies.

### Integration with clinical preceptors

Lofgren et al. (2021) found that clinical preceptors recognized their role in APRN student education but felt unprepared and lacked support from the academic institution. They stressed the need for academic and professional input for APRN education. Integrating faculty into clinical practices has helped build partnerships and support for preceptors, which enhanced APRN student clinical experience (Padilla & Evans-Krieder, 2022). The newly released Standards for Quality Nurse Practitioner Education (NTF sixth edition, 2022) specifically outline the responsibilities of educational institutions in clinical education and preceptor engagement. Willing preceptors may not have been educationally prepared to teach and evaluate students clinically. Therefore, it is essential to provide support for this role transition (Hallas et al., 2021). Heusinkvelt and Tracy (2020) developed and evaluated an online preceptor education course that increased preceptor knowledge, self-efficacy, and willingness to serve as a preceptor. The NTF used the AACN Essentials, the NP Core Competencies, and Doctoral Level competencies to establish national standards/competencies as the basis for curriculum and practice recommendations.

### Discussion

There is often a disconnect between academic and practice evaluations of competencies in APRN students. Faculty need a framework to bridge the gap between the classroom and precepted clinical practice to guarantee the validity of the evaluation. The NTF Criteria (2022, Criterion II.G) stipulate the need for academic faculty and preceptors to communicate at the beginning of every rotation to discuss the expectations of the clinical rotation. Goals, learning outcomes, and nuances of

evaluation must be discussed in detail before, during, and at the end of the rotation to promote fidelity between the classroom and on-site learning and evaluations. Nationally recognized competencies will help to standardize student performance in clinical practice. The use of the PRIME model may provide this needed structure and consistency.

Further research into the utilization of EPAs in evaluating NP student practice is warranted, especially in light of the new competencies outlined by AACN and NONPF. Using EPA's beginning in preclinical courses and building on the progressive competency acquisition through precepted practice allows for consistency of evaluation. It is necessary to assess the learning that has occurred in the clinical setting, how it reflects the classroom learning, and how it prepares them for health care needs in the future.

Combining well-researched instruments with crucial faculty-preceptor communication across settings is evident throughout the literature and informed the review and development of the Clinical Evaluation Framework (Figure 1). Many novice-level skills are developed during the preclinical courses, building a foundation for practice. The PRIME model provides the structure for evaluation and the progression of competency development through advanced beginner, competent, and finally proficient. The congruence of evaluation across the program and into the clinical arena allows for assessing competence over time and location. In addition, wisdom and insights from academic and practice perspectives are invaluable and reinforce APRNs' progressive transition from school to practice throughout the educational process.

However, a crucial handoff between faculty and preceptor is at the center of success in allegiance between academia and practice. No individual tool can replace the time necessary for faculty and nurse practitioner preceptors to confer and agree on the principles of APRN evaluation.

The guidelines for communication set forth in the NTF Standards for Quality Nurse Practitioner Education provide an outline for interaction between faculty and preceptors. In the area of clinical competence, both formative and summative evaluations are completed for every student (NTF, 2022, Criterion IV G). Also outlined are necessary documentation of preceptor information, including type of site, characteristics of patients, and experiences offered (NTF, 2022, Criterion II G, IV B). Sample forms included in the NTF outline faculty expectations of preceptors and preceptor expectations of faculty (NTF, 2022, Sample Form F: In support of Criterion II.G.). Following these two recommended checklists, the constancy of clinical education experiences can be more reliably verified. Formalizing the utilization of the checklist contained in these standards with the integration of a clinical evaluation framework will increase the fidelity of clinical

evaluation. Further research into using these guidelines to support the consistency of evaluation across all learning environments is also warranted. A pilot study has been launched at the author's university on how crucial communication and consistent evaluation methods provide the elements for success in NP competency development and evaluation.

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