

Rebuilding the Workforce: The Impact of North Carolina's Registered Nurse (RN) Refresher Program and Curriculum Transformation on Nursing Practice

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The North Carolina Area Health Education Centers Registered Nurse (RN) Refresher Program's 2024–2025 curriculum revision was the result of statewide collaboration. All modules were revised and costs reduced, resulting in more than a 55% enrollment increase and 45 license reactivations, demonstrating that academia and practice partners can collaborate to address North Carolina's nursing workforce shortage.

Introduction

Across the United States, the nursing workforce faces a persistent and well-documented challenge, a widening gap between the demand for registered nurses (RNs) and the supply of qualified, actively practicing professionals. In North Carolina alone, data from the North Carolina Board of Nursing (NCBON) indicate that nearly 100,000 nurses in the state are not currently practicing, with the majority holding inactive licenses.¹ That figure is not simply a statistic. It represents tens of thousands of trained, credentialed professionals who, for a range of reasons (e.g., family responsibilities, personal health, or prolonged career pauses), have stepped away from patient care, often without a clear path back.

The North Carolina Area Health Education Centers (NC AHEC) RN Refresher Program exists precisely to clear that path. Designed to help registered nurses who have left practice return to patient care with confidence and clinical competency, the program has operated in some form for roughly 50 years, making it one of the most enduring re-entry initiatives in the state's health care education ecosystem.¹ In fiscal year 2024–2025, it underwent its most significant transformation, with an extensive curriculum revision aligned with the American Association of Colleges of Nursing's (AACN) *Essentials: Core Competencies for Professional Nursing Education* that modernized content, improved accessibility, and produced immediate, measurable results in enrollment and licensure reactivation.² This commentary examines the depth of that revision: how the curriculum was

updated to reflect current nursing practice, incorporate evidence-based practice, and address evolving technological advances, and what the outcomes mean for communities across North Carolina.

Program Overview

The NC AHEC RN Refresher Program consists of a self-paced online theory course and clinical practicum. Admission to the program is conducted on a rolling basis, providing the learner with the autonomy to decide when enrollment best aligns with their individual needs. The learner is allowed nine months to complete the theory course and is required to initiate the clinical practicum within 12 months of completing the theory course. The clinical practicum, conducted under the supervision of a preceptor, must be completed within three months. In accordance with the North Carolina Administrative Code (NCAC) (21 NCAC 36 .0220 [q], 2024), as enforced by the North Carolina Board of Nursing (NCBON), the theory course and clinical practicum must be completed within 24 months.³

The theory course, *Nursing Review for Registered Nurses Online Course at UNC-Chapel Hill School of Nursing*, consists of 24 modules that the learner has nine months to complete. The modules progress from foundational nursing concepts to more progressively complex content. Each module consists of learning outcomes, pertinent content, key takeaways, self-test, and a final exam. The final exam consists of 25 questions focused on the application of clinical judgment, and learners must score an 80% or higher on each exam. Upon completion of the theory course, the learner receives credit for 140 contact hours or 14 continuing education units (CEUs).

The clinical component of the RN Refresher program is only available to learners who are residents of North Carolina. For the clinical component, every effort is made to place learners in a setting that aligns with their previous nursing experience or their intended area of practice upon reentry. Learners work closely with a preceptor to meet established clinical outcomes during the required 140 hours. Upon completion, learners earn an additional 140 contact hours or 14 CEUs for the clinical component of the RN Refresher Program. This regional infrastructure also allows the opportunity for the clinical practicum to be coordinated and scheduled locally, with nurses completing their hours in their own communities.

The Challenge: Nurses on the Sidelines

The program's target population is broadly focused on registered nurses with lapsed, inactive, or encumbered licenses, as well as actively licensed nurses seeking a comprehensive practice update. Not every nurse who leaves practice does so by choice. Life events, caregiving responsibilities, personal illness, or licensing complications can all result in a nurse stepping away, sometimes for months, or even years. When nurses are ready to return, the barriers can feel formidable. Clinical knowledge evolves continuously. Hospital technology

changes. Pharmacological guidelines, documentation systems, and patient care protocols are rarely static, and a nurse who last practiced a decade ago may find today's clinical environment almost unrecognizable.

The structural barriers to re-entry are real. As Wagner and colleagues note in their 2022 study of the NC AHEC RN Refresher Program, participants found statistically significant improvement in self-efficacy scores on the Clinical Skills Self-Efficacy Scale (CSES) from pretest to post-test ($P < .05$). These data provide empirical support for what program administrators have long observed: a structured refresher training measurably restores clinical readiness.⁴ That finding matters not only for the nurses themselves, but for patients who depend on a well-prepared workforce.

The program's target population is broad, including registered nurses with lapsed, inactive, or encumbered licenses, as well as actively licensed nurses seeking a comprehensive practice update.⁵ Under North Carolina nursing regulations, any nurse who has not held an active license in any jurisdiction for five or more years is required to complete a board-approved refresher course before reinstating.⁶ The NC AHEC RN Refresher Program provides that pathway: a single, coherent re-entry route approved by the NCBON and structured to restore both competency and confidence.

The Curriculum Revision: A Statewide Collaboration

The curriculum revision was launched on October 1, 2024. It was a comprehensive rebuilding effort that drew expertise from every corner of North Carolina's health care and academic communities. The effort included subject matter experts from the University of North Carolina (UNC) School of Nursing (SON), UNC System institutions, UNC School of Medicine, UNC Eshelman School of Pharmacy, regional AHECs, other North Carolina colleges, and primary care settings. Their collective expertise ensured that the revised content reflected current clinical standards across specialties, not the perspective of any single institution or discipline.

The recent revision was not the program's first major overhaul. A prior revision, led by Schuler and Wagner and documented in the *Journal of Nursing Regulation*, used the Centers for Disease Control Framework for Program Evaluation in Public Health to guide a comprehensive revision between 2014 and 2015. That earlier effort established the program's evidence-based focus organizing content around contemporary practice, technology, quality and safety, and health care legislation, and set the precedent for the statewide collaborative model that the 2024 revision would expand and deepen.⁷ The 2024 revision built directly on that foundation, updating content for contemporary practice, improving affordability, and transitioning the course to a new learning management system.

The revision was coordinated by the UNC SON AHEC Office, the NC AHEC Program Office, South Piedmont AHEC, UNC Digital and Lifelong Learning (DLL), and the NCBON, each contributing distinctly. DLL provided instructional design expertise for the overall revision. The NCBON conducted simultaneous quality improvement reviews alongside the module-by-module content updates. The SON AHEC Office led the review and editing of both the student handbook and the electronic course textbook. South Piedmont AHEC oversaw the migration to a new learning management system (LMS), ensuring the platform transition did not disrupt the student experience or compromise the academic integrity of the course.

A series of subcommittees managed the complexity of the process, covering registration and enrollment, marketing, the LMS platform, library resources, information technology and technical support, and student services. Monthly meetings brought key stakeholders together to track progress and resolve cross-functional issues. The result was a course that was launched on schedule, offering a reduced price, with all 24 modules reviewed, revised, and cleared for copyright compliance, which is a logistical achievement that reflected years of institutional relationship building across the AHEC network.

The Curriculum: 24 Modules from Foundation to Complexity

The revised online theory course consists of 24 self-paced modules that guide learners through a carefully sequenced progression, beginning with foundational concepts and building toward complex, system-specific clinical content.⁵ Each module includes clearly defined learning outcomes, assigned readings available for download, core content, key takeaways, a self-assessment quiz, and a final exam.

The early modules establish the intellectual and ethical framework for contemporary nursing practice. Module 1 addresses the evolution of the nursing profession in response to changing patient populations, shifting care delivery models, and the growing emphasis on evidence-based practice. Modules 2 through 6 cover quality and safety, patient care delivery systems, legal and ethical aspects of nursing, clinical judgment and the nursing process, and the role of technology in nursing care. The legal and ethical module reflects longstanding curriculum priorities: Jnah and Schuler authored an earlier version of this content, and the themes of scope of practice, accountability, and ethical decision-making have remained central across every iteration of the program.

Module 7 introduces a lifespan lens, examining the process of aging and its implications across patient care settings. That perspective threads through the clinical modules that follow, reminding learners that pharmacological decisions, assessment findings, and care plans must always account for where a patient is in their life course.

Modules 8 and 9 address pharmacotherapy and medication administration—areas where the pace of change in clinical practice is especially rapid and where knowledge gaps carry direct patient safety implications. Module 10 extends this into fluid, electrolyte, and acid-base balance, while Module 11 addresses infection prevention, bloodborne pathogen control, and biohazard safety within a patient safety framework.

The core clinical curriculum spans Modules 12 through 23, each dedicated to a major body system or care context: respiratory; cardiovascular and peripheral vascular; gastrointestinal; renal and urologic; musculoskeletal; neurologic; endocrine; immune and hematologic; oncological disorders; the perioperative patient; emergency situations; and the hospitalized patient with mental health disorders. That final category reflects an important acknowledgment—nurses in virtually every clinical setting encounter patients whose care involves behavioral health dimensions, and the returning nurse must be prepared for that reality. Module 24 closes the theory course with a focused review of clinical nursing skills, bridging didactic content and the hands-on practicum that follows.

The theory component is approved for 140 contact hours, equivalent to 14 continuing education units (CEUs). Upon successful completion, students may proceed to a clinical practicum that provides an additional 140 contact hours and 14 CEUs, for a combined total of 280 instructional hours. Up to 50% of the clinical practicum can include simulation-based education, as outlined by the NCBON.⁶

Student Learning Outcomes: What Returning Nurses Are Expected to Know

The program's learning outcomes are governed by the NC AHEC Nurse Council RN Refresher Committee and are explicitly aligned with NCBON regulations and rules. They are organized into two domains (theory and clinical) that together define what it means to return to practice as a competent, safe, and patient-centered nurse.

Upon completing the theory portion, a student should be able to describe the influence of contemporary nursing, evidence-based practice, and technology on patient care; review the legal and ethical dimensions of nursing, including scope of practice; outline the impact of various care delivery systems on the healthcare landscape; and use the nursing process to plan, implement, and evaluate individualized patient care. Students should also be able to describe the anatomy, physiology, and pathophysiology of common disorders; identify nursing implications related to medication administration and fluid balance; apply quality and safety principles; and articulate standard precautions related to infection prevention and workplace violence.

At the clinical level, theoretical knowledge must translate into action. A returning nurse should be able to function within legal and ethical boundaries in real time, apply the nursing process with live patients, use pharmacological and fluid balance knowledge when administering medications, and bring quality and safety principles to everyday workplace decisions.

A consistent thread across both sets of outcomes is the acknowledgment of human complexity. Whether in the classroom or at the bedside, nurses are expected to consider culture, diversity, and dignity, including a patient's right to a dignified death. This reflects the program's broader philosophical commitment: that clinical competence is necessary but not sufficient. The returning nurse must also be able to engage with patients as whole people, shaped by their backgrounds, beliefs, and life circumstances.

Notably, the accelerated cohort in the 2022 study consisted of nurses responding to the COVID-19 pandemic. In a 2021 study, also in the context of the pandemic, Wagner and colleagues documented that 129 of 189 enrolled nurses successfully completed the program within 90 days.⁸ That responsiveness under pressure underscores the program's adaptability and its relevance beyond routine workforce replenishment.

Program Outcomes and Workforce Impact

The numbers from fiscal year 2024–2025 are compelling. A total of 144 nurses enrolled in the RN Refresher Program, which was more than a 55% increase over the prior fiscal year. That increase was driven in part by the newly revised curriculum and its lower cost, which broadened access to nurses who might otherwise have been unable to afford re-entry training. Between 2005 and 2025, more than 3000 registered nurses have completed the RN Refresher program.

The licensure reactivation data offers the clearest measure of workforce impact. During fiscal year 2024–2025, nearly 45 registered nurses reactivated their licenses, including licenses that had previously been encumbered, expired, or inactive. Each reactivated license represents a qualified nurse returning to direct patient care in North Carolina communities. The program's employment outcomes reinforce that nearly half of graduates reported being employed as nurses, with additional graduates actively seeking nursing positions.

A Collaborative Model and a Path Forward

What makes the NC AHEC RN Refresher Program distinctive is not any single institutional contribution, but the depth of the infrastructure that sustains it. Funded by NC AHEC, the partnership between the NC AHEC Program Office, UNC SON, South Piedmont AHEC, UNC DLL, and the NCBON represents a model that has proven to be a valuable collaboration.

Each partner contributes something the others cannot provide alone: academic credibility, statewide reach, instructional design expertise, regulatory oversight, and regional relationships through all nine AHEC regions. The collaborative efforts and involvement of subject matter experts from all nine AHEC regions during the curriculum revision ensured that content reflects the breadth of nursing practice environments across North Carolina—from urban academic medical centers to rural critical-access hospitals.

The results from the RN Refresher program demonstrate that accessibility, affordability, and academic rigor are not competing values. By reducing program costs and maintaining the quality standards required by the NCBON, the program has shown that workforce investment and educational excellence can advance in parallel. For North Carolina, the RN Refresher Program is more than a continuing education offering. It is a workforce strategy—one that treats returning nurses not as liabilities to be managed, but as assets to their profession, to be developed and returned with confidence and competency to the patients who need them.

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Declaration of Interests

The authors have no conflicts of interest to report.

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