Retention Initiatives in the North Carolina Community College System

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Over the past 15 years, the North Carolina Community College System has provided education and instruction to 258,713 allied health professionals, 183,059 nurse aides, 27,125 associate-degree nurses, and 9,926 practical nurses. Innovations that can increase program retention will have a positive impact on the state's future health care workforce.

The North Carolina Community College System (NCCCS) is committed to meeting the educational needs of the state's current and future health care workforce. All 58 community colleges in the NCCCS offer one or more health science programs, and the system currently has 57 health science program titles available, which provide education at the associate, diploma, or certificate level.

Between 1997 and 2012, the NCCCS provided education and instruction to more than a quarter of a million (258,713) allied health professionals. Of these, 56% received training in emergency medical science (EMS), 12% in diagnostic services, 10% in health information, approximately 4% in dental or visual care, and 3% in therapy/rehabilitative programs (health and fitness science, occupational therapy assistant, physical therapy aide, physical therapy assistant, rehabilitation assistant, speech-language pathology assistant, therapeutic massage, and therapeutic recreation assistant). Another 16% received training in a range of other subjects, including medical assisting, surgical technology, and respiratory therapy. During the same period, 183,059 nurse aides, 27,125 associate-degree nurses, and 9,926 practical nurses received their education in the NCCCS (unpublished data from the NCCCS data warehouse; February 2013). Overall the NCCCS provides educational instruction to approximately 85% of the students enrolled in allied health programs in the state [1]. The NCCCS also provides prelicensure education for the majority of graduates in North Carolina who sit for the National Council Licensure Examinations for registered nurses (NCLEX-RN) and practical nurses (NCLEX-PN).

North Carolina's need for nursing and allied health professionals will continue to grow not only because of the influx of new residents into North Carolina but also because of the state's aging population and its aging workforce. In 2011, there were 53 counties in North Carolina in which the number of residents older than 60 years was greater than the number of residents younger than 17 years. It is projected that by 2025 the state will have 86 counties in which residents older than 60 years outnumber those younger than 17 years [2].

One major issue affecting the health care workforce is attrition in nursing and allied health education programs, which is costly both to the educational system and to students [1, 3, 4]. Because community colleges play a key role in the education of health care providers, reducing attrition in this setting would have a positive impact on students, community colleges, and the state's health care workforce.

A 2008 report on the success of programs in the NCCCS that offer an associate degree in nursing (ADN) noted that 90% of the 2002 graduates of those programs worked in the state after graduation, which is a compelling reason to reduce the attrition rate of community college programs [3]. After publication of this report, many community colleges began evaluating their attrition rates, identifying contributing factors, developing strategies and interventions, and implementing changes. For example, colleges have looked at their individual admission requirements and orientation sessions to ensure that students are fully aware of program expectations. Schools have also developed remediation activities and early alert systems for students who experience academic difficulties.

Five community colleges received funding from the US Department of Education's College Access Challenge Grant Program during the period from November 18, 2011 through June 30, 2012, and 16 different colleges received such funding during the period from November 1, 2011 through June 30, 2013; these funds were used to implement strategies to improve retention rates of at-risk students enrolled in health science programs. The amount of funding given to individual colleges ranged from $5,011 to $12,005 over a 6-month period. At each of the colleges selected for funding, health science personnel identified the disciplines they would target—nursing, surgical technology, pharmacy technology, EMS, etc. Students considered to be at risk for attrition included first-generation college students; those with...
a certificate of high school equivalency rather than a high school diploma; students who had taken remedial courses; those working more than 20 hours per week; those lacking family support and/or transportation; students with significant family responsibilities, such as caring for children or other dependents; students who had been readmitted into the program; those who scored less than 80% on a course test; and those receiving a rating of “unsatisfactory” on a clinical evaluation.

Each of the 21 colleges that received College Access Challenge Grant funding identified specific strategies they would employ to reduce attrition among at-risk students. Strategies included administering a learning style test to the students and providing faculty members with professional development in learning styles and instruction modalities; establishing program-specific tutors to work with students; and providing students with individualized supplemental instruction plans that cover topics such as test-taking strategies, study skills, critical thinking skills, problem-solving activities, time management, and organization. Another strategy is to increase the use of technology to deliver content at the student’s convenience. Such technologies included SmarThinking—a live, on-demand, online tutorial that provides access to expert nursing and allied health educators 24 hours a day, 7 days a week; Livescribe smartpens, which have an embedded computer and digital audio recorder; and video learning modules.

Other approaches to reduce attrition include developing and using clinical reasoning and simulation scenarios to help meet students’ learning needs, both in the classroom and in clinical areas; providing a retention counselor, facilitator, nursing success coach, or advisor for students; and providing standardized practice tests that give students an opportunity to practice test-taking, improve their knowledge of content, and enhance their problem-solving skills. In some cases, mandatory tutoring sessions are required for students who do not achieve the required test score in the course. Finally, students may be screened for Irlen syndrome, a light-perception disorder that inhibits reading skills and can be alleviated by using color overlays over materials.

Most of the funded colleges initiated their interventions with students in the spring semester and reported a slight increase in their spring retention rate compared with that of the fall semester or the previous year. The number of students in each cohort was small and any long-term impact is unknown at this time, but colleges will continue to evaluate these cohorts to determine whether the implemented strategies and interventions had long-term impacts on retention.

Several other initiatives in the health sciences may also have an impact on education for health science students in the NCCCS. A comprehensive study of the system’s ADN programs was conducted by the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill [3], and a curriculum improvement project was carried out from 2006 to 2008 to redesign the ADN curriculum. This resulted in a new, concept-based curriculum standard and new nursing courses for community colleges. Another initiative was a curriculum accreditation alignment project in 2012-2013 that brought the EMS curriculum standard in line with changes in national EMS education standards. The revision allows more flexibility, expands content, strengthens alignment with the North Carolina Career and College Promise program, and facilitates diploma and certificate options for colleges. Finally, a practical nursing and nursing assistant curriculum review project was initiated in October 2013 and is scheduled to be completed by June 2014. Changes to the practical nursing program are needed to provide a seamless concept-based transition for licensed practical nurses entering an ADN program.

In the 2010 summary report The Future of Nursing: Leading Change, Advancing Health [5], the Institute of Medicine of the National Academies recommended that educational systems promote seamless academic progression. One effort to fulfill this goal is the Regionally Increasing Baccalaureate Nurses (RIBN) initiative [6], which involves collaboration among the community college system, the university system, and the Foundation for Nursing Excellence. In this collaborative partnership, a student is dually admitted into both a community college program and a university program. During the first 3 years of study, the student completes general education and nursing courses at the community college and takes 1 course per semester at the university. After successfully completing these courses, the student will receive an ADN from the community college and will be eligible to sit for the NCLEX-RN examination. The student then completes a fourth year of study on the university campus, where he or she will take nursing courses in gerontology, community health nursing, and nursing leadership. On completion of the fourth year, the student will be awarded a bachelor of science in nursing (BSN) degree.

In 2010, students in the first cohort of the RIBN program were dually admitted to Asheville-Buncombe Technical Community College and Western Carolina University. Statewide, 25 of the 55 community colleges that are approved to offer an ADN are partnering with neighboring universities to participate in the RIBN initiative [6]. [Editor’s note: For more information on the RIBN initiative, see the commentary by Johnson on pages 39-44 and the sidebar by Dickerson on page 40.]

Another important transfer initiative includes the review and revision of the Comprehensive Articulation Agreement between the NCCCS and the University of North Carolina (UNC) system. The agreement governs the transfer of credits when students complete 2 years of undergraduate study at a community college followed by 2 years of study at one of the state’s public universities.

Also, a subcommittee comprised of UNC system RN-to-BSN program directors is working on developing a common
core of required courses that will be acceptable both to the community college system and to the RN-to-BSN programs of the UNC system. A common core of required courses would smooth the educational pathway for RNs who have an ADN and would remove a barrier for those seeking a BSN degree.

On October 18, 2013, the State Board of Community Colleges approved a new curriculum standard for Health Science: Therapeutic and Diagnostic Services [7], which will take effect in fall of 2014. The proposed standard consists of general education courses that provide a foundation for success in nursing and allied health programs, including biology, psychology, critical thinking, and mathematics. Additional non–general education courses include orientation to the health sciences, medical terminology, cardiopulmonary resuscitation, and other technical courses that form the foundation of 6 program majors: EMS, medical assisting, nursing assistant, pharmacy technology, phlebotomy, and therapeutic massage.

The new curriculum standard serves as a guidance tool to help students choose specific courses that will provide a foundation for success in nursing and the allied health programs. The new standard also provides additional Career and College Promise pathway options for high school students and establishes program coding that facilitates accurate data collection for students enrolled in pre–health science programs. Finally, the standard will strengthen the applicant pool and increase completion rates in health science programs.

Initiatives in health care education will continue, because educating the state’s health care workforce is a top priority of the NCCCS. We are proud that colleges in the system provide qualified health care professionals (nursing and allied health) for the state, and we will continue to strive to ensure that North Carolinians have qualified health care practitioners wherever they are needed: at the scene of accidents and in hospitals, long-term care settings, physician offices, clinics, community centers, and patients’ homes. NCMJ

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References