

training. According to a 2001 study, only 45% of graduates perceived their geriatric coverage as adequate, two-thirds of graduates felt adequately prepared for geriatric acute care, and only half felt adequately prepared for long-term care.⁵ Only about half of family medicine and internal medicine graduating residents felt prepared to care for elderly patients.⁵ Currently none of the residency review committee requirements state a minimal time of exposure for geriatric training, and only family medicine requires exposure in all settings, including nursing home and home visits.

According to the Alliance for Aging Research, the United States will need about 37,000 geriatricians in 2030.⁶ In 2007, there were 7,128 certified geriatricians and 1,596 certified geriatric psychiatrists in the US.⁴ North Carolina has 3.6 geriatricians per 100,000 patients, slightly less than the national average of 3.8. One estimate predicts an increase of geriatricians of less than 10% by 2030, while others predict a decline due to fewer physicians recertifying and a decreased interest in fellowship programs.⁴ The fill rate of geriatric fellowship programs has declined over the past years and is currently at 58%.⁷ Several intrinsic factors appear to contribute to this shortage:

- Emotionally and physically demanding working conditions.
- Misgivings about working with older patients.
- Challenges presented with multiple medications and comorbidities.

However, the most important factor of all is likely the financial disadvantages of working in geriatrics. Geriatricians must tolerate lower reimbursement through Medicare than private carriers. This is due to a low proportion of well-paying procedures in the practice and more time required to care for complex patients. The National Institute of Medicine suggests pay enhancements for practitioners (not only physicians) with certification of special expertise in geriatrics.⁴

The fee-for-service Medicare program provides fragmented care and precludes an interdisciplinary approach by paying for only one visit per day. However, several interdisciplinary programs going by various acronyms—PACE, IMPACT, PROSPECT, and HELP—have shown improved care to beneficiaries while often saving Medicare money. In May 2007, United States Senators Blanche Lincoln and Susan Collins cosponsored a bill for the Geriatric Assessment and Chronic Care Coordination Act (GACCCA). It proposes to cover a comprehensive geriatric assessment with a plan to keep the patient healthy and provide coordination of care for individuals with multiple chronic conditions, including dementia.⁸

Currently the 4 medical schools in North Carolina and the Asheville Family Medicine program offer geriatric fellowships. East Carolina University's (ECU) Family Medicine and Internal Medicine residency programs require a month rotation in geriatrics. The family medicine program also requires a 2-year longitudinal program in nursing home and home care. For medical students, ECU uses standardized patients to teach geriatric skills in 5 sessions during the second year and requires 3 days of clinical experience during the third year. Duke requires 5 geriatric symposium days in the first year. Wake Forest has integrated geriatric knowledge

Significance of Post Baccalaureate Training in Gerontology in Promoting Healthy Aging

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A hopeful factor in communities' capacities to promote healthy aging among older adults is the increasing number of professionals who have post baccalaureate training in gerontology or geriatrics. In broad terms, gerontology is the study of the aging process, and geriatrics is the health care specialty related to the diseases and conditions associated with the aging process. In practice, the 2 disciplines overlap and a growing emphasis is being placed by both on how to encourage people to age successfully and stay as healthy as possible over the life course.

Given a recent wave of infusing gerontological content into a wide range of graduate curricula, professionals across a number of disciplines are more and more likely to have specific training related to promoting healthy behaviors in midlife and older adults. Frequently, such curricula also address how the community context can encourage such behaviors.

Examples of how gerontological training can influence healthy aging include:

- The medical school applicant who takes a graduate level course in health and aging and becomes interested in consumer activation for health promotion in future practice.
- The pharmacy student who pursues a concurrent post baccalaureate certificate in gerontology and interns with a "brown-bag" program to do medication safety checks.
- The registered nurse whose subsequent training in gerontological nursing leads her to develop a falls prevention program for older adults in the public health department in her community.
- The registered dietitian who is a consultant to retirement communities and returns to school part-time for an MS in gerontology and goes on to teach undergraduate students about the nutritional aspects of aging.
- A group of physical therapy students with interests in older adults who become champions of "walkable" communities after a joint project on community infrastructure.

in the basic science courses of the first 2 years and, with funding from the Donald W. Reynolds Foundation, is working on an expanded curriculum which would include 11 clinical days for the third year. All 4 North Carolina medical schools offer a geriatric elective in the fourth year.

Gerontological Nurses

Older adults already constitute up to 62.5% of a nurse's caseload. Older adults comprise 50% of hospital patients, 85% of home care patients, and over 90% of nursing home patients.⁹ Yet most nurses have limited preparation in the principles of geriatric nursing care because few undergraduate nursing education programs included this content until recent national initiatives supported gerontological curriculum enhancements. These efforts include publication of national standards, curriculum materials, faculty development, and awards for innovative educational strategies.⁹

Gerontological nurse practitioners (GNPs) are advanced practice nurses with specialized nursing education in the diagnosis, treatment, and management of acute and chronic conditions often found among older adults. Employed in a variety of practice sites including ambulatory care clinics, long-term care facilities, and acute and sub-acute hospitals, GNPs collaborate with other members of the health care team to manage the health care needs of older adults.¹⁰ Despite the demand for gerontological nurse practitioners, their overall numbers remain low nationwide with only 3% of all advanced practice nurses specializing in gerontology.¹¹ Nurses interested in advanced practice nursing in North Carolina are fortunate that 2 of the state's schools of nursing have graduate-level programs that lead to preparation as gerontological nurse practitioners. Duke University and the University of North Carolina at Greensboro have long-established programs that have been successful in recruiting and graduating nurse practitioners prepared to care for the rapidly growing older adult population in our state and in the nation.

Educational Funding for Geriatric Medical and Nursing Education

There are a number of programs including the National Health Services Corps that have a long history of successfully recruiting providers into shortage areas with a loan forgiveness program. To address the shortage of geriatricians, South Carolina has instituted a geriatric loan forgiveness program. It can forgive \$35,000 of student loan debt incurred during medical school for each year of specialized fellowship training in geriatric medicine if the physician establishes a practice in South Carolina and stays for at least 5 years. The program was started in 2005 and has increased medical students' interest in fellowship programs at the University of South Carolina Medical School and the Medical University of South Carolina in Charleston.¹² Whether these programs will be able to sustain interest in geriatrics and increase the total number of geriatricians—or draw providers from other areas—remains to be seen.

- The family medicine physician who, because of a geriatric rotation in medical school, has an understanding of the health benefits of recognizing and addressing caregiver stress.

Gerontological training opportunities for these and other professionals who are in the position to promote healthy aging are expanding in colleges and universities across North Carolina.

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Recognizing the need to increase the number of advanced practice nurses prepared to care for our nation's older adults, the William Randolph Hearst Foundation in 2001 established endowments for scholarships for nurses pursuing careers as gerontological nurse practitioners. The University of North Carolina at Greensboro was one of 5 schools of nursing in the United States to receive this funding.¹³ In addition to supporting gerontological nurse education curriculum initiatives for advanced practice nurses, the John A. Hartford Foundation awarded the American Association of Colleges of Nurses (AACN) a grant of \$2.23 million in 2001 to establish the Creating Careers Program. Twenty-three schools of nursing across the country received funding to award scholarships to advanced practice gerontological nursing. Duke University School of Nursing was one of the recipients of this scholarship program. Availability of these scholarships have afforded students the opportunity to complete their programs of study full-time, allowing them to more rapidly enter the workforce.¹⁴ Information and applications for additional scholarship opportunities from individual schools of nursing generally are available to applying students on the school of nursing websites. Nurses pursuing a graduate degree may apply for the North Carolina Master Nurse Scholars Program scholarships which provide funding to nurses for full- or part-time study if they are committed to remaining in North Carolina following graduation.¹⁵

In March, California Senator Barbara Boxer submitted a bill to establish a federal loan forgiveness program of \$35,000 annually for 2 years of service and an additional \$40,000 annually for years 3 and 4. In addition to physicians, this program will include nurse practitioners, physician assistants, clinical nurse specialists, social workers, and psychologists who complete specialty training in geriatrics.¹⁶

Another option to address the need for geriatricians is to entice geriatric providers to stay in the field or attract retiring medical professionals into geriatrics. In 2015, more than 50% of the workforce in the United States will be over 40.¹⁷ With an aging workforce we will need to consider creative solutions such as flexible work hours to allow for caregiving and innovative lateral entry programs that build on the existing knowledge of a mature health care workforce.

The Geriatric Academic Career Award has been instrumental in the development of academic geriatricians and fostering