Training Physician Assistants for Rural Appalachia: An Academic Partnership for Interprofessional Collaboration

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Wake Forest School of Medicine and the College of Health Sciences at Appalachian State University are partnering to train physician assistants to practice as primary care providers in medically underserved parts of Western North Carolina. The partnership will also develop interprofessional education and team-based training activities for health professions students.

The Department of Physician Assistant Studies at Wake Forest School of Medicine and the College of Health Sciences at Appalachian State University (ASU) are partnering to train physician assistants (PAs) to practice as primary care providers in rural, medically underserved areas in the Appalachian region of North Carolina. The Wake Forest University Physician Assistant Program has received approval from the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) to expand its existing program by up to 32 students per year, with a target launch date of June 2014 (when training begins for the class of 2016). One-third of the students in this class will complete the majority of their first-year education on the ASU campus in Boone, North Carolina; these students will be encouraged to practice after graduation in medically underserved areas. Recruitment efforts are focusing on students who want to work in such locations, particularly those who are from the Appalachian region or who are US military veterans with field experience as medics. Partial funding for this new initiative comes from a 3-year grant of $375,000 from The Duke Endowment in Charlotte, North Carolina.

A Natural Partnership

Wake Forest School of Medicine is located in Winston-Salem (Forsyth County), which is on the eastern edge of Appalachia. Wake Forest University offers doctor of medicine (MD), doctor of philosophy (PhD), master of science (MS), and master of medical science (MMS) degrees, including an MMS in Physician Assistant Studies, as well as several joint degree programs. The program to train PAs utilizes a curriculum centered on self-inquiry and team-based learning; in 2011 US News and World Report ranked this program 18th on a list of 123 accredited PA educational programs in the nation [1].

ASU is located in Boone, North Carolina, among the Blue Ridge Mountains near the state’s western border. ASU’s College of Health Sciences was established in 2010 to address growing health care needs in Western North Carolina and beyond. Committed to teaching, research, and service through interprofessional education, ASU’s College of Health Sciences includes undergraduate and graduate programs in nursing, nutrition and dietetics, health care management, social work, communication sciences and disorders, health promotion, and exercise sciences.

Within North Carolina’s rural Appalachian counties, many residents face challenges due to high poverty rates, rural isolation, a lack of health insurance, poor access to health care, and a low number of primary care providers. These factors have contributed to increased rates of mental illness, substance abuse, overweight, and obesity; poor nutrition and poor oral health in both children and adults; low health literacy; a decreased number of preventive care visits for children; and increased mortality [2]. For example, some children in Ashe County live more than 2 hours away from the nearest primary care provider, and the age-adjusted mortality rate for chronic lower respiratory disease is 52% higher in Ashe County than in North Carolina as a whole. Furthermore, 20 of the 29 federally designated Appalachian counties (out of 100 counties in North Carolina) have suicide rates that are among the highest in the state [3, 4].

To better meet the health care needs of this high-risk population, Wake Forest School of Medicine and ASU’s College of Health Sciences seek through their partnership to increase the number of PAs working in primary care in North Carolina’s rural Appalachian counties. The collaboration is intended to expand training opportunities for PA students in the Appalachian counties and to enhance the curriculum...
of Wake Forest’s PA program by focusing specifically on the needs of medically underserved people in rural areas. The philosophy underlying the partnership is that the best way to increase the number of health care providers in an area is to make it possible for health professions students to train within these communities and to form relationships with potential employers. Current initiatives are already bringing together ASU students who are studying nutrition and dietetics or nursing with medical and PA students from Wake Forest School of Medicine, and additional collaborations designed to foster improved interprofessional practice are being developed.

Program. The Boone campus program will use the Wake Forest School of Medicine PA curriculum, which provides 24 months of training—approximately 1 year each of preclinical and clinical education. The entire class of 88 to 96 students will attend a month-long basic science leveling block in Winston-Salem; one-third of these students will then receive 9 months of preclinical training on the ASU campus in Boone. The preclinical component—which consists of didactic study as well as classroom, small-group, laboratory, and experiential learning activities—will be delivered consistently and simultaneously to students on the Wake Forest and ASU campuses. After the preclinical year, all students will begin 12 months of required and elective supervised clinical rotations. New clinical rotation sites are being identified in communities in and around Boone to meet the objectives of the program. Nearly 2 years of workforce development activities with regional health systems, physician practices, and other employers preceded the application for expansion, and these workforce efforts are ongoing. Students studying at the Boone campus will be enrolled in the Wake Forest PA program and will graduate with an MMS degree from Wake Forest University.

Faculty. Program faculty will primarily be employees of Wake Forest School of Medicine. Strategies that allow faculty members to hold joint appointments at Wake Forest and ASU are in place to optimize cross-campus synergies. All faculty will be required to participate in faculty meetings, curriculum planning retreats, and quality improvement activities by video conference, teleconference, or in person. A lead faculty member or distant campus coordinator who is an employee of Wake Forest School of Medicine will direct distant campus operations and will report to the chair of PA studies at Wake Forest.

Responsibilities. The 2 schools will share responsibility for selection of faculty and staff, student recruitment and admissions, health workforce and access-to-care projects, academic activities, interdisciplinary opportunities, and research. Wake Forest School of Medicine will be solely responsible for managing the curriculum, directing and overseeing faculty responsibilities, and evaluating students. Wake Forest School of Medicine will also appoint a senior faculty administrator to advocate for and facilitate collaborative interprofessional education and scholarship.

The first extramurally funded initiative born from the collaboration is a health professional pipeline and curriculum enrichment project funded by the Health Resources and Services Administration. This project has successfully attracted students, provided community-based internships centered on caring for the community, and created opportunities to help increase students’ competitiveness for PA education in several target groups (for example, individuals who belong to an underrepresented minority or those who are from economically or educationally disadvantaged backgrounds).

ASU will provide physical space and support services for students on the Boone campus, including student health services, career counseling, library services, and information technology support and maintenance. ASU has also dedicated the time and effort of faculty members and key leaders within the College of Health Sciences to support interprofessional education and interdisciplinary research.

Interdisciplinary Inquiry-Based Learning

Among the accreditation requirements set forth by ARC-PA is a requirement that programs “must include instruction to prepare students to work collaboratively in interprofessional patient centered teams.” ARC-PA further specifies that this instruction should include “content on the roles and responsibilities of various health care professionals, emphasizing the team approach to patient centered care beyond the traditional physician-PA team approach,” that it should “assist students in learning the principles of interprofessional practice,” and that it should include “opportunities for students to apply these principles in interprofessional teams within the curriculum” [5].

The PA program curriculum is anchored by an inquiry-based learning model that brings teams of students and faculty members together to solve complex patient problems. This model integrates disease management and health maintenance with real-life issues facing patients and caregivers. Issues include cultural competency, biomedical ethics, interprofessional practice, value-based care, models of care, payment systems, community resources, and barriers to care.

While the PA program at ASU’s Boone campus has not yet begun, pilot projects conducted at both Wake Forest and ASU have already demonstrated the effectiveness of inquiry-based learning methods when applied to interprofessional teams of students and faculty. Over the past 2 years, such teams have been tasked with solving complex medical cases under the guidance of an interdisciplinary group of faculty mentors. These pilot projects have included students from various health and other graduate programs, including programs in medicine, law, and divinity, and programs of study for PAs, nurses, and social workers. Faculty members from both institutions and clinicians from Wake Forest Baptist Medical Center are working to promote interprofessional education through feasibility studies and curriculum rede-
sign. These curriculum enrichment activities focus on the application of 4 domains of core competencies for interprofessional collaborative practice: values and ethics; roles and responsibilities; communication; and teams and teamwork [6]. The premise is that both institutions, with strong connections to regional health systems and clinical leaders, can shift the paradigm for health professions education in Western North Carolina toward one that produces highly effective health care teams that can succeed in an era of value-based purchasing and patient-centered care.

Program Evaluation

A comprehensive program evaluation plan is in place and will assess several measures: applicant and matriculate demographics; percentage of applications from targeted groups, including North Carolina residents, military veterans, and individuals from educationally and/or economically disadvantaged backgrounds; cognitive measures and preceptor evaluations of student achievement, with comparison across campuses; graduate interest; selection of primary care careers; employment rates 6 months after graduation; graduate performance on national certification examinations; and various workforce development assessments, including regional job growth and retention of graduates within Appalachian counties. Because the program will not be implemented until June 2014, no outcome or performance data are available at this time.

Overall Goals of the Collaboration

In addition to expanding Wake Forest School of Medicine’s PA program with the primary objective of addressing unmet health care needs in Western North Carolina, Wake Forest University and ASU also seek to enhance the curriculum for training health professions students at both institutions by taking advantage of regional opportunities and by using the key strengths of each institution. Objectives include development of new training experiences, both in rural and underserved communities and in academic medical center environments, as well as development of interprofessional education and team-based training activities. There is also a shared interest in enhancing opportunities to work together on additional grant applications and research collaboration.

Wake Forest University and ASU hope to stimulate intellectual exchange for the purposes of envisioning new models for health professions education and designing novel models to address current and future health workforce challenges. The overall goals of the partnership are clearly ambitious, but once achieved, the current effort to establish an expanded PA training program on the Boone campus will provide a firm foundation for growth.

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References


