

Innovation in Rural Family Medicine Training: The Mountain Area Health Education Center's Rural-Track Residency Program

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The Mountain Area Health Education Center (MAHEC) established the Hendersonville Family Medicine Residency Program in 1994 as a rural-track training program to address the growing shortage of primary care physicians in rural North Carolina. Designed to develop successful rural health physicians, the program originally started with only 2 residents per class (for a total of 6 residents) in Hendersonville, North Carolina, a small town with a population of only 12,000 people in 2012 [1]. The program now has 4 residents in each class. The curriculum features robust obstetrical and procedural training, flexible elective time, and a strong emphasis on practice management and community leadership. The program has been continually accredited and has filled all of the resident positions offered each year since 1996; the teaching practice now provides more than 20,000 outpatient visits per year.

In addition to training rural family physicians, the program has been a catalyst for improving the quality of primary care and increasing access to care. It has responded to a variety of community health needs by providing direct patient care to uninsured patients, to those with significant behavioral health needs, and to the region's growing Latino population. The program has also provided medical leadership for the Henderson County Department of Public Health, and it was a key partner in the coalition of community health organizations that established the Free Clinics of Henderson County.

The program was an early adopter of practice redesign [2], team-based care, group medical visit models, and the integration of behavioral health care with primary care. It was also the first practice in Henderson County to achieve Level 3 recognition as a patient-centered medical home

from the National Committee for Quality Assurance. In addition, the program conducted a regional pilot program on near-miss errors in ambulatory settings, which was sponsored by the Agency for Healthcare Research and Quality [3]; it created an innovative model of low-overhead outpatient practice [4]; and it adopted a drop-in group medical visit model for high-risk uninsured patients [5]. The program also allowed community physicians to use the same electronic medical record system as the residency practice at a greatly reduced cost, which resulted in a unified health record for most patients in Henderson County [6].

In 2007 the Hendersonville Family Medicine Residency Program was 1 of only 14 family medicine residency programs in the United States chosen to participate in the Preparing the Personal Physician for Practice (P4) project, which was designed to test new models of residency education and to train physicians to lead patient-centered primary care health teams [7]. The program also sponsors summer experiences designed to increase North Carolina medical students' interest in rural health careers [8]. The program recently received a Teaching Health Center grant, which was authorized by the Patient Protection and Affordable Care Act of 2010; this grant allowed the program to increase its complement of residents to 4 per year while merging clinical operations with the local federally qualified health center [9].

Since 1999 the program has graduated 37 family physicians, all of whom passed their certification boards; 24 of these individuals were graduates of US allopathic medical schools, 6 were graduates of US osteopathic schools, and 7 were international medical graduates. Of these 37 graduates, 57% practiced in North Carolina for at least 3 years;

65% practice in rural communities; 60% work in a location that has been designated by the US Department of Health & Human Services as either a full or partial health professional shortage area; 16% are full-time faculty members of family medicine residency programs; and 22% went on to complete a 1-year fellowship in geriatrics, advanced obstetrics, or international medicine. These results compare very favorably with those of rural-track training programs in other regions of the United States [10].

Rural-track training programs have generally been significantly more successful than traditional family medicine residencies in placing graduates in rural or underserved practice settings [11]. The Hendersonville Family Medicine Residency Program has also made significant contributions in terms of improving access to primary care in its service area and developing new models of care. These successes warrant further investigation to discover how such training experiences can be scaled to address North Carolina's continuing shortages of rural primary care physicians. *NCMJ*

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