How West Virginia School of Osteopathic Medicine achieves its mission of providing rural primary care physicians

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At a time when Appalachia and West Virginia in particular suffered from extremely limited healthcare in their mostly rural areas, a group of determined West Virginia osteopathic physicians took a bold step in organizing the Greenbrier College of Osteopathic Medicine in 1974. Originally a private medical school, its founders established the school for the purpose of providing physicians to serve the rural and underserved areas of West Virginia and Appalachia. In January 1976, the move from a private to a public institution brought the college into the state system of higher education. By virtue of its state funding, the college became the West Virginia School of Osteopathic Medicine (WVSOM) and focused its efforts on preparing West Virginia residents to practice primary care medicine in rural communities of the state.

Since its inception, the school has carried out its stated mission of educating primary care osteopathic physicians for rural communities. The school is dedicated, first and foremost, to service for West Virginia and prepares graduates to care for the special healthcare needs of West Virginia’s elderly population. The institutional mission is supported by education service and research. Education is primary and receives top priority for institutional resources. In a region with a real need for rural primary care physicians, WVSOM is distinguished by its success in training and placing osteopathic physicians in rural West Virginia and Appalachia. The mission not only drives the admissions process, but all aspects of the institution, including curriculum, faculty, and postgraduate training.

According to the American Osteopathic Association’s 1999 Yearbook and Directory, 621 (54%) of WVSOM’s 1146 graduates specialized in family practice.1 A retrospective study of recent graduates practicing in Appalachia in 1978 to 1990 found that WVSOM led the nation in providing physicians for rural practices in the Appalachian region.2 Similarly, the 1999 report of the State College and University Systems of West Virginia showed that 17% of WVSOM graduates from 1989 through 1994, who did not have contractual obligations to leave for other southern states, practiced in rural areas of West Virginia, compared to an average of only 7% for the two allopathic medical schools in the state.3,4,5,6 The school’s success in meeting its mission of training primary care physicians for practice in rural communities of West Virginia and Appalachia and in serving the needs of rural healthcare has led to increased recognition for the college. The Graduate and Professional Degree Program Review Committee of the University System of West Virginia has twice designated WVSOM as a “Program of Excellence.”

The college faculty and administration have often been asked to identify reasons for WVSOM’s success and to list the programmatic components that have contributed to these accomplishments.4 Several of the reasons for the college’s success relate to WVSOM’s unique mission and how the program has developed specifically to address this mission. While some of the special aspects of the program have contributed to WVSOM’s success, a few factors threaten the college’s ability to accomplish its mission.

Mission
Focus on rural/underserved/West Virginia/Appalachian populations
WVSOM recruitment efforts focus primarily on West Virginia. A review of alumni files indicates that graduates from rural backgrounds are more likely to return to these areas. Twice each year, admissions staff visit all colleges and universities in West Virginia, usually accompanied by a faculty member of the school who in many instances gives a hands-on demonstration of osteopathic manipulative treatment and answers specific questions regarding the profession and the educational process. School faculty participate in educational enrichment programs for pre-college students to interest them in osteopathic medicine. For example, for approximately 10 years, 1000 high school students per year from 30 to 40 West Virginia high schools visited WVSOM’s gross anatomy lab. The school also recruits students from out-of-state institutions of higher education, primarily in the Appalachian region. The school gives admissions preference to students from the region that plan to return to the Appalachian region to practice.

The rural focus of the school’s mission also provides guidance to the faculty regarding curriculum. WVSOM requires clinical trainees to spend at least 3 months of the clinical curriculum at rural West
Virginia sites. Many strong preceptors and hospital-based experiences have been developed in these regions, so many students choose to spend substantially more time in rural areas. Between June 1, 1998, and May 31, 1999, WVSOM students completed 2543 weeks of rotations in rural West Virginia. This represents approximately 40 weeks of rural West Virginia rotations for each graduate (out of 80 weeks of rotations, thus roughly half the clinical program). At least 1 month of a student’s clinical curriculum must be at a site that participates in the Rural Health Education Partnerships (RHEP) program, a statewide initiative that includes all health science schools and requires community-based service, research, and interdisciplinary education activities. In 1998-1999, the average student completed approximately 17 weeks of RHEP rotations.

Quality teaching in rural community settings is possible because of recruitment of dedicated adjunct faculty (many of whom are WVSOM alumni) who have agreed to “give back” to the osteopathic profession and their college by serving as preceptors—often without monetary reward. Ongoing faculty development programs for preceptors focus on clinical teaching skills (with a more recent emphasis on information technology), both within the RHEP program and in faculty-development programs sponsored by WVSOM or the Mountain State Osteopathic Postdoctoral Training Institution. The school monitors teaching quality through site visits by core clinical education staff and through continuing communication among the school’s faculty/administration, adjunct faculty, and the students. For the 1998 and 1999 academic years, the overall rating of student feedback on their required clinical rotations averaged above 3.60 on a 4.00 scale, indicating student satisfaction with their clinical rotations.

As described above, about half of the clinical curriculum takes place in rural West Virginia. Lewisburg, where students spend their first 2 years of medical education, is in a rural area of the state with a population of about 4000 and serves as a living laboratory for the type of region a future physician might wish to live in and practice medicine. Relations between the community, the school, and students support the mission of the institution.

Focus on family practice

Primary care

WVSOM’s mission provides a clear picture of the school’s orientation to family practice and primary care. Applicants to WVSOM anticipate acceptance, knowing that the school has a primary direction toward the education of family practice/primary care physicians and understanding that the school gives preference to applicants interested in family practice and other primary care specialties.

During the preclinical years, family practice role models help to influence students. Family physicians provide leadership for clinical courses in family medicine, physical diagnosis, and physician skills, as well as coordinate and advise systems or basic science courses. These same physicians provide leadership for key committees in the college, including the Admissions Committee and the Curriculum Committee.

During the clinical years, the first clinical rotation—a 6-week preceptorship—takes place with an osteopathic family physician, usually in a rural West Virginia clinical setting. We believe that a positive experience with the initial preceptor goes a long way in the decision toward future practice. WVSOM requires students to complete 3 additional months of family medicine, 3 months of internal medicine, 2 months of pediatrics, 1 month of obstetrics/gynecology, and 1 month of geriatrics/community medicine, as well as traditional rotations in emergency medicine, psychiatry, emergency medicine, and electives. Hospital experiences occur in small and large hospitals, as future physicians must understand both office-based practice and the tertiary medical centers to which they will refer patients.

Focus on teaching

By formal institutional policy, research and service rank as secondary considerations in the school’s educational mission. WVSOM is primarily a teaching institution, and this message is communicated to all members of the campus community, both implicitly and explicitly. The needs of the teaching program remain central to budgetary and programmatic decisions. For example, the school bases faculty merit pay allocation on a formula in which teaching contribution is weighted 50%; professional development (including research and patient care), 35%; and service, 15%. This “singleness of purpose” makes priorities clear to administration, faculty, students, and applicants.

The WVSOM faculty handbook specifies that, “...to be considered for retention, a faculty member must demonstrate superior teaching performance, professional growth, and a contribution to the college community appropriate to the respective term of service to the institution.” For the 1999-2000 academic year, the average student overall rating of faculty teaching performance by the Year 1 class was 4.41 on a 5.0 scale; the average rating from Year 2 students was 4.44. Through mentoring, administrative and peer review, and formal and informal faculty development, faculty have responded to the requirement for teaching excellence.

Special aspects

Osteopathic principles and practice/manipulative medicine

Osteopathic medicine has a long tradition of preparing physicians for family practice/rural primary care. The students and faculty who seek osteopathic programs recognize and support this tradition.

Over the past 7 years, WVSOM has strengthened its emphasis on the integration of osteopathic principles and practice (OPP) and manipulative medicine into its total curriculum. Led by a strong, experienced faculty, the OPP courses constitute a key component of the curriculum, and student knowledge and skills are further developed in supervised student clinics and reinforced by required osteopathic case studies within the Family Medicine I and Family Medicine III rotations.

A standing faculty committee monitors...
osteopathic integration. More than half of the members of the basic science faculty have completed the total distinctive osteopathic portion of the curriculum, and the school conducts faculty development programs several times each year to further strengthen faculty understanding of osteopathic concepts. Student feedback forms used for evaluation of all courses, rotations, and faculty teaching include items specific to integration of OPP; the integration of osteopathic philosophy and principles is one of the items considered in annual evaluation of all teaching faculty.

**Cadaveric anatomy**

WVSOM’s curriculum blends traditional and innovative approaches to produce graduates with a strong generalist foundation. Retention of cadaveric anatomy in the curriculum illustrates this point. Long considered one of the foundations of the basic sciences and a primary cornerstone of osteopathic medicine, anatomy serves as the introduction to the clinical sciences. WVSOM encourages the age-old concept of the cadaver being the medical student’s first patient. More important, it focuses the beginning student on the physical, emotional, intellectual, and spiritual aspects of patient care. In addition, cadaveric dissection leads to a greater view of how the various parts of the human body contribute to the whole. This type of instruction supports the basic osteopathic principles, which focus on the body as a whole unit and the idea of structure and function being reciprocally interrelated, and which teach a reverence toward all human beings, the uniqueness of an individual, and the fragility of life.

**Stable faculty**

The on-campus faculty of WVSOM has an average of 10 years’ experience at the school. A stable faculty provides the benefit of maintaining a solid curriculum and building personal and lifelong relationships with students and graduates. Knowledgeable faculty who fully understand both osteopathic medicine and the unique mission of this school have led to stability of purpose. Faculty serving in small communities and living in the surrounding rural area can teach and exemplify the positive aspects of living and working in bucolic America.

**Community service orientation**

The WVSOM has focused itself more as a community-service-oriented institution in contrast to the traditional research university medical school model. The school has a strong tradition of community involvement. As indicated previously, the curriculum focuses primarily on community-based clinical training in small to mid-size community hospitals, physicians’ offices, and rural clinics rather than in larger tertiary care settings. WVSOM students participate in a statewide initiative that incorporates community service projects into their clinical training. The institution plays a vital role in the life of the community in Lewisburg, West Virginia, as well as other communities around the state. Numerous community-oriented programs have been conducted to help improve the quality of life of the community at large, including partnership in education programs with local elementary schools; school-sponsored community activities; support of nonprofit charity organizations such as the American Cancer Society’s Relay for Life and National Multiple Sclerosis Society’s MS 150 Bike Tour; state fair health screenings; annual women’s and men’s health fairs; community-oriented lectures on health and wellness; the Anatomy Tour Program; and other educational programs to introduce grade school children to science, osteopathic medicine, and health.

The tradition of treating all persons at WVSOM in a caring manner remains central to the school’s community service. One example of this has been the creation of a free soup kitchen that provides first- and second-year students with a potluck dinner each day during exam weeks. A staff member who has been able to enlist the assistance of faculty, staff, administration, and the Lewisburg community to care for students at a stressful time initiated this program. Thus, because of its many programs and activities, the institution serves as a model of service to others. We believe that the creation of this caring environment provides a valuable asset when training physicians to serve in rural and underserved communities.

**Administrative leadership**

The WVSOM has benefited from a stable, dedicated administration that keeps the institution focused on its mission. The administration has provided strong leadership academically, politically, and philosophically while allowing each constituent group (that is, classified staff, faculty) to do their job responsibly and creatively. The administration has encouraged active participation in the development of the institution and its programs. Development efforts include the creation of new facilities with faculty and staff input; development of administrative policies such as the faculty merit pay plan; and the establishment of a student-run osteopathic manipulative clinic. The value of an administration that supports and encourages all members of the institution to contribute in a positive way to its mission cannot be overemphasized as a critical factor in the school’s success.

**Deterrents**

A number of deterrents to physician placement in rural West Virginia and Appalachia exist, and a brief description of these follows.

**Malpractice**

Malpractice insurance continues to increase the cost of practicing medicine, particularly in West Virginia. This rise has often been accompanied by a litigious public spurred on by attorneys, as well as the state legislature. A few graduates have admitted that they find security in traditional, narrow specialties, which have circumscribed content, rather than dealing with the more complex field of family medicine. Also, big-city practice with immediate access to specialists may seem to some to be a more secure practice environment. Recognizing the need for graduates to be appropriately confident, WVSOM provides students with high-quality, on-campus education and with confident, capable rural preceptors.
to serve as role models. In addition, WVSOM teaches students the appropriate use of distance technology to allow quick access to information and consultants from even the most remote areas.

**Community qualities**

Rural communities sometimes have difficulty attracting and retaining physicians and their families, because these areas often lack resources such as safe drinking water, high-quality schools, churches, and community recreation facilities. In cooperation with the West Virginia Bureau for Public Health, other health professions schools, and other health/education agencies, WVSOM participates in statewide development activities to help communities build this infrastructure. Through the Rural Health Education Partnerships project, clinical students have the opportunity to develop skills in community leadership, and in some cases can demonstrate an immediate impact on the community while developing skills, which will be valuable to them as physicians in rural practice.

**Disparity of third-party funding**

Low third-party reimbursement has been a long and continuing problem as it relates to the ability of a physician to survive in a rural environment. Little has been done to correct this inequity, which will be a problem for some time. Aspects of the Balanced Budget Act of 1998 exemplify the increasing disparity between rural and urban practice environments. WVSOM attempts to recruit students with a commitment to service and tries to reinforce these motives during preclinical and clinical education.

**Student debt**

Surveys of graduating seniors indicate that the educational debt of WVSOM students averages more than $100,000.8 When a physician begins practice after some years of postdoctoral training, this debt (plus accumulated interest) becomes due. To address this problem, WVSOM continues to work with the state of West Virginia to develop loan repayment programs for students who practice in medically underserved areas of the state. This program, while limited, has seen and produced some positive effect.

**Comment**

A number of issues and resources have been identified as contributing to the success of WVSOM in placing primary care/family practice physicians in rural and underserved West Virginia and Appalachia in carrying out the mission of the school. Understanding and maintaining a focused direction has allowed the school to concentrate its materials and efforts toward achieving its mission.

**References**


2. Roberts A, Davis L, Wells J. Where physicians practicing in Appalachia in 1978 to 1990 were trained and how they were distributed in urban and rural Appalachia. Acad Med 1991;66:122-125.


