

Scholars in Rural Health: Outcomes From an Assured Admissions Program

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Background: *The Scholars in Rural Health program is designed to attract and retain young rural Kansans with a high probability of successful careers in rural communities. This program shapes the students' experiences toward rural health in preparation for entry into medical school. Scholars accepted into and satisfactorily completing this program are admitted automatically to the School of Medicine.* **Methods:** *A retrospective review of all Scholars program data was completed to evaluate if intended outcomes were achieved. All candidates who were admitted into the program since its inception in 1997 were included. Program data included information from application through residency graduation and establishing a practice.* **Results:** *Since 1997, 104 candidates have been selected to participate in the Scholars in Primary Care or Scholars in Rural Health program. Of the 40 who completed medical school, 30 (72%) matched to a primary care residency program; 21 (50%) matched to family medicine. Of the 19 residency graduates, 16 (84%) practice in rural or urban medically underserved communities. Eighteen practice in Kansas.* **Discussion:** *As one component of the effort to provide physicians for Kansas, the Scholars in Rural Health program showed beneficial outcomes for attracting applicants who want to practice in rural or other medically underserved communities and who maintain that interest over the long process of medical education. The designation of medical school positions for 14 Scholars in Rural Health enhances the likelihood of success for maintaining a pipeline of physicians for rural Kansas.*

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Background and Description of the Program

The shortage of primary care physicians in Kansas is a long-standing problem. A total of 88 of 105 Kansas counties are classified as "rural" based on population density (either frontier, rural, or dense rural).¹ As of the latest state report,¹ 89 of 105 Kansas counties were designated, wholly or partially, as federal Primary Medical Care Health Professional Shortage Areas. In addition, 54 of 105 counties were designated by state definitions as medically underserved. Finally, 95 counties were eligible for federally designated Rural Health Clinics, an effort to increase recruitment of physicians to medically underserved areas. In total, 100 of 105 Kansas counties are designated, wholly or partially, by one of the various definitions as medically underserved for primary care.

The Scholars in Primary Care program was initiated in 1997 at the University of Kansas School of Medicine to provide assured admission for selected students from

rural Kansas or designated underserved urban areas who participate in a 2-year premedical curriculum with supplementary directed experiences in primary care.² The goal was to increase the number of students who choose to practice primary care medicine in rural Kansas or designated underserved urban areas. In 2006, the program was modified slightly, and the name was changed to Scholars in Rural Health to reflect more accurately its primary targeted objectives to attract rural Kansans who wanted to practice medicine in rural Kansas. The programs began with six Scholars each year and grew to 14 per year.

The Scholars in Rural Health program is designed to attract and retain young rural Kansans with a high probability of successful careers in rural communities. This program shapes the students' experiences toward rural health in preparation for entry into medical school. Scholars accepted into and satisfactorily completing this program are admitted automatically to the School of Medicine. The anticipated outcome is an increase in the number of students from Kansas rural communities who choose to practice in rural Kansas.

Applicants must be Kansas residents with significant experience living in a rural Kansas community. They must demonstrate intellectual promise as documented by academic performance in college. They also must demonstrate the intention to practice medicine in rural areas of Kansas and a commitment to service by exhibiting the dedication and compassion necessary to be a competent and caring physician. The application and selection process is similar to regular medical school admissions and includes two personal interviews. The primary difference is that Scholars applicants interview after their undergraduate sophomore year and enter medical school 2 years later after successful completion of program requirements. To achieve assured admission, each program participant must demonstrate achievements in academic programs and a significant, informed interest in rural health care.

Scholars are assigned a rural primary care physician mentor beginning in the junior year of college. The mentors are usually physicians from Scholars' hometowns or nearby. Scholars shadow for a minimum of 200 hours over the 2 years. They write four case reports, including one each on an ambulatory clinic patient, an inpatient, a patient whose clinic visit involved prevention, and a patient with mental health or behavioral issues. They also write a paper on a population-based, community health issue.

Methods

A retrospective review of all Scholars in Primary Care/Rural Health program data was completed to evaluate if intended outcomes were achieved. All candidates who were admitted into the program since its inception in 1997 were included. Data about program participants were maintained in the Office of Admissions, the Office of Student Affairs, and by the Program Director. Data included information collected at application, at admission to the program, and at admission to medical school. Performance in medical school, the residency Match results, and post-residency practice and location also were reviewed.

Results

Since 1997, 104 candidates have been selected to participate in the Scholars in Primary Care or Scholars in Rural Health program. Twenty-three (22%) are undergraduate students participating in the Scholars program. Twenty-five (25%) are medical students. Eleven (10%) withdrew from the Scholars program to pursue other careers. One was terminated from the Scholars program for deficiencies in the requirements. Two withdrew from medical school after matriculation because of academic difficulties.

Forty-two Scholars (40%) have completed medical school. All participated as Scholars in Primary Care. Of those, 30 (72%) matched to a primary care residency

program; 21 (50%) matched to family medicine. In comparison, school-wide totals during the same graduation years were 46% matched to a primary care residency program; 17% matched to family medicine. Six of the other Scholars matched to general surgery and three to obstetrics-gynecology. The remaining three Scholars matched to either anesthesiology or radiology.

Nineteen have graduated from residency programs. Of the residency graduates, 18 of the 19 practice in Kansas. Twelve graduates practice in rural, non-metropolitan communities (11 in Kansas and one in northern Oklahoma, only 30 miles from the Kansas border). Thus, 63% of resident graduates from the Scholars program serve rural communities. Of those in rural communities, 11 are family physicians, and one is a general surgeon. In addition, one family physician graduate practices in an urban clinic for the medically underserved. Three graduates are full-time faculty members at KU School of Medicine. These latter four graduates also fulfill the original program objectives by practicing in an urban underserved community. Therefore, 84% of program residency graduates practice in either a rural or urban underserved community.

No comparable residency data exists for all KU School of Medicine medical school graduates, but it is unlikely that the Scholars outcome data would be matched. However, Schmidt and Kallail³ found that 40% of Kansas family physicians from a rural community practiced in a rural community, whereas only 10% of family physicians from an urban community practiced in a rural community.

Discussion

The Scholars in Primary Care program had a definite rural selection bias since most participants came from rural communities. The outcomes revealed that after a minimum of 9 years in the medical education pathway (two in the Scholars program, four in medical school, and three in residency), all but one practice in Kansas. Most practice in medically underserved areas, particularly in rural communities. Thus, the program outcomes are positive and have shown to be a beneficial pathway for rural applicants to track back to a rural practice. As noted by Rabinowitz and colleagues,⁴ "Increasing the number of physicians who grew up in rural areas is not only the most effective way to increase the number of rural physicians, but any policy that does not include this may be unsuccessful" (p. 212). That concept is a foundation for the Scholars in Rural Health program.

Historically, the KU School of Medicine has a strong primary care record. Yet, rural physician shortages remain despite these efforts. As one component of the effort to provide physicians for Kansas, the Scholars in Rural Health program has shown beneficial outcomes for attracting applicants who want to practice in rural communities and who maintain that interest over the

long process of medical education. Thus, the designation of medical school positions for 14 Scholars in Rural Health enhances the likelihood of success for maintaining a pipeline of physicians for rural Kansas.

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References

1. Kansas Department of Health and Environment. Primary Care Health Professional Underserved Areas Report. Kansas 2010. Topeka, KS: Kansas Department of Health and Environment, 2010. www.kdheks.gov/olrh/download/PCUARpt.pdf.
2. Kallail KJ. The Scholars in Primary Care program: an assured admission program. *Acad Med* 2001;76:499.
3. Schmidt WE, Kallail KJ. Assessing the physician shortage in rural areas of Kansas and Paraguay. Presented at the Third International Forum on Family Medicine for the Americas, Spain, and Portugal, Rio de Janeiro, Brazil, 1987.
4. Rabinowitz HK, Diamond IJ, Hojat M, Hazelwood CE. Demographic, educational, and economic factors related to recruitment and retention of physicians in rural Pennsylvania. *J Rural Health* 1999;15:212-8.