

# JRMC | Journal of Regional Medical Campuses

## Considerations for Selecting Applicants to Rural Medicine Programs

David L Bramm, MD FAAP

DOI: <https://doi.org/10.24926/jrmc.v4i4X.4284>

Journal of Regional Medical Campuses, Vol. 4, Issue 4 (2021)

[z.umn.edu/JRMC](https://z.umn.edu/JRMC)

All work in JRMC is licensed under CC BY-NC



## Considerations for Selecting Applicants to Rural Medicine Programs

David L Bramm, MD FAAP

### Abstract

The selection of medical students destined for rural practice is important to help provide access to care for the 20% of the US population who live in rural America. Knowing which medical school applicants will go into rural practice is an inexact science, although the objective predictive characteristics of future rural doctors are well known and evident in the literature. The role of rural program directors is to identify which applicants will likely choose a FM residency, done primarily by identifying which rural predictive characteristics the applicants possess. Admissions committee members are not expected to determine the likely practice locations of rural applicants and need only have the responsibility of determining which applicants should become physicians.

The selection of medical students destined for rural practice is important to help provide access to care for the 20% of the US population who live in rural America. By 2030, there will be 25% fewer rural physicians practicing medicine.<sup>1</sup> Knowing which medical school applicants will go into rural practice is an inexact science, although the objective predictive characteristics of future rural doctors are well known and evident in the literature. Admissions committees have the responsibility of determining which applicants should become physicians, but it is unclear if they should be charged with determining the likely practice locations of rural applicants.

The reasons for the shortage of rural physicians include what is lacking in rural living - professional support, opportunities for spousal employment, urban amenities, and quality schools. On the other hand, factors such as societal orientation, lack of interest in research, suitable rural role models, and rural family ties are important predictors of future rural practice.<sup>2</sup> Additionally, early exposure to medically underserved areas affects future practice locations.<sup>3</sup>

Furthermore, we are producing fewer primary care physicians because of enhanced opportunities for urban centric fellowships in "primary care" specialties. Approximately 48% of pediatricians and 80% of internal medicine residents become subspecialists.<sup>4,5,6</sup> The converse is true of Family Medicine doctors; over 90% provide primary care. Family physicians only constitute 15% of the primary care workforce yet they provide 42% of the care rendered in rural areas.<sup>7</sup> It is

rare that subspecialists choose rural practice, thus emphasis must be placed on admitting students who will choose Family Medicine. Programs whose goal is to provide physicians to rural sites must be mindful of these facts.

Therefore, the initial task of rural program directors is to *identify which applicants will likely choose a FM residency*, done primarily by identifying which rural predictive characteristics the applicants possess. The role of the admissions committee is to not impede this process, but rather, more importantly to *determine which applicants are suitable for medical school*. This is no different from the role of admissions committees for the incoming class at large; they are under no obligation to determine what practice locations non-rural applicants might choose. There is no data that suggest an interview has any usefulness in predicting ultimate rural practice.<sup>8</sup>

Knowledge of the factors related to the selection of rural family medicine by students is specialized and medical school interview committees do not necessarily realize this. In the seminal paper by Parlier, *et.al.* it was noted that, "Rural upbringing, positive rural exposure, preparation for rural life and medicine, partner receptivity to rural living, financial incentives, integration into rural communities and good work-life balance influence recruitment and retention". The author cited no evidence in 113 references that the medical school interview added any predictive benefit.<sup>9</sup> Additionally, factors such as use of concrete language on an application may be unimpressive to an interviewer but has positive

**David Bramm** is the director of the Rural Medicine Program for the University of Alabama School of Medicine, Huntsville Regional Medical Campus, Huntsville, AL.



predictive value for future rural practice. Lack of undergraduate research, an idealized view of rural living, the desire to make a difference in a community and having extended family in a very rural part of the state are salient factors that interviewers may not fully grasp or uniformly explore. This knowledge gap threatens to encourage the interviewers to use “feelings” or “impressions” for student selection, which is anathema—unscientific and often sadly erroneous. Even the definition of rural may not be accurately known by admissions committees.<sup>10,11</sup>

The US Census Bureau defines rural as any population, housing, or territory NOT in an urban area.<sup>12</sup> In Alabama we define rural as living in a town less than 50 000 that is not in the footprint of a larger urban area. The large western states have quite remote places more properly deemed *frontier*. At the University of Alabama Birmingham School of Medicine, the responsibility for screening rural applicants lies with the rural program directors who have knowledge of both the practice of rural medicine and the literature related to the topic. This knowledge allows the broadest evaluation of rural applicants because there are students who are technically rural who manifest few characteristics predicting rural practice and some from the rural fringe who have a compelling rural sense of place. Additionally, mentees may be well known to program directors who recognize prized intangibles no interviewer is able to discern. The strongest predictor, rural upbringing, is not the only important factor associated with the choice of rural practice.<sup>13</sup> Personal interests are rarely predictive unless compellingly rural, like 4H, FFA, and/or animal husbandry, but the reverse may not be true; a truly rural student may well enjoy golf, tennis, or soccer. These activities are related more to opportunity than geography. When the author practiced in a rural Mississippi town of 1 400, the other doctors in the two-county area included: An amateur astronomer with a home observatory. An expert in gourmet food and Italian opera (who had a stunning record collection). A scratch golfer who had done post-doctoral training at the Lahey Clinic. A light plane pilot who had been an engineer in a previous career. The common factor was that all of these doctors were originally from rural Mississippi, had family there and

were desirous of broad scopes of practice, but their passions could be well construed as urban-centric. Dr. John Wheat published a paper showing that (Alabama) Rural Medical Scholars who chose Family Medicine had activities revealing a humanitarian personality and a commitment to rural underserved communities as well as plans to specialize in FM (urban shadowing had negative predictive value).<sup>14</sup> Our data shows that the rural applicant most likely to pursue rural FM has only shadowed rural physicians, lacks urban research, uses concrete speech, does not interview well, and is from a town less than 25 000. Other predictive elements are community college attendance, extended family in rural Alabama, and lifelong rural residence. It is the obligation of all medical schools and particularly those with missions to produce rural physicians for their states to examine their admission apparatus to ensure that the process is data driven and does not unwittingly exclude qualified rural applicants by judging them through inappropriate and irrelevant measures.

## References

1. Skinner L, Staiger DO, Auerbach DI, Buerhaus PI. Implications of an aging rural physician workforce. *N Engl J Med*. 2019;381:299-301. doi:10.1056/NEJMp1900808
2. Mitra G, Gowans M, Wright B, Brenneis F, Scott I. Predictors of rural family medicine practice in Canada. *Canadian Family Physician*. 2018;64(8):588-596.
3. Tavernier LA, Connor PD, Gates D, Wan JY. Does exposure to medically underserved areas during training influence eventual choice of practice location? *Med Educ*. 2003;37(4):299-304. doi:10.1046/j.1365-2923.2003.01472.x
4. What does the pediatric residency match data look like? Medical School Headquarters. 2018. Accessed July 19, 2021. <https://medicalschoollhq.net/ss-48-what-does-the-pediatric-residency-match-data-look-like>
5. Macy ML, Leslie LK, Turner A, Freed GL. Growth and changes in the pediatric medical subspecialty workforce pipeline. *Pediatr Res*. 2021;89:1297-1303. <https://doi.org/10.1038/s41390-020-01311-7>

6. Internal medicine residency match results virtually unchanged from last year. American College of Physicians. 2014. Accessed July 19, 2021. <https://www.acponline.org/acp-newsroom/internal-medicine-residency-match-results-virtually-unchanged-from-last-year>
7. About Rural Health Care. National Rural Health Association. Accessed July 20, 2021. <https://www.ruralhealthweb.org/about-nrha/about-rural-health-care>
8. Hyer JL. *Rural Origins and Choosing Family Medicine Predict Rural Practice*. The Robert Graham Center; 2007. Policy paper 49.
9. Parlier AB, Galvin SL, Thach S, Kruidenier D, Fagan EB. The Road to Rural Primary Care: A Narrative Review of Factors That Help Develop, Recruit, and Retain Rural Primary Care Physicians. *Acad Med*. 2018;93(1):130-140. doi:10.1097/ACM.0000000000001839.
10. Coburn, AE. *Issue Brief #2: Choosing Rural Definitions: Implications for Health Policy*. Rural Policy Research Institute Health Panel; 2007.
11. Ray RA, Young L, Lindsay DB. The influences of background on beginning medical students' perceptions of rural medical practice. *BMC Medical Education*. 2015;15:58. doi10.1186/s12909-015-0339-9.
12. Brooks RG, Walsh M, Mardon RE, Lewis M, Clawson A. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: a review of the literature. *Acad Med*. 2002;77(8):790-8. doi: 10.1097/00001888-200208000-00008.
13. How does the Census Bureau define rural? United States Census Bureau. Accessed July 29, 2021. [https://www.google.com/search?q=us+census+definition+of+rural&rlz=1C1GCEB\\_enUS898US904&oq=us+census+definition+of+rural&aqs=chrome..69i57j0i22i30.7720j1j7&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=us+census+definition+of+rural&rlz=1C1GCEB_enUS898US904&oq=us+census+definition+of+rural&aqs=chrome..69i57j0i22i30.7720j1j7&sourceid=chrome&ie=UTF-8)
14. Avery DM Jr, Wheat JR, Leeper JD, McKnight JT, Ballard BG, Chen J. Admission factors predicting family medicine specialty choice: a literature review and exploratory study among students in the Rural Medical Scholars Program. *J Rural Health*. 2012;28(2):128-36. doi: 10.1111/j.1748-0361.2011.00382.x