



Medical School Expansion: An Opportunity to Meet Your State's Rural Health Care Needs

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State policymakers play the key role in deciding what types of physicians are produced in their states. Announcement of a physician shortage is already producing expansion of medical school class size, largely with state funding. Medical school expansion, when done strategically, provides a timely opportunity to produce a workforce ready to meet the rural healthcare needs of states and the nation.

What are the current policy issues in the healthcare workforce?

Healthcare workforce policy debate is frequently reduced to a single issue:

- **Supply:** How many healthcare workers are needed to meet population needs?

However, two other issues of equal importance to workforce policy are:

- **Composition:** Which types of healthcare workers with what skills are needed to meet population needs?
- **Distribution:** Where would healthcare workers ideally be geographically distributed to meet population needs?

The effectiveness of public investment that supports the production of its workforce should be evaluated according to its success in meeting investor (taxpayer) aims: a skilled, diverse output of providers that delivers care accessible to all investors. More providers may increase provider access, but only if they offer the type and location of services demanded by the population.

Recently, much of the healthcare workforce talk has focused solely on supply — whether the United States will face a surplus or shortage of physicians in the near future.ⁱ The American Association of Medical Colleges (AAMC) recently called for a 30 percent expansion of medical school enrollment from the 2002 level over the next decade.

While ensuring adequate supply is a valuable consideration, policymakers must additionally consider issues of composition and distribution of physicians in their states. No where is this issue more pressing than in rural populations.

Why should policy-makers be concerned about the rural physician workforce?

Problems with Composition: The United States lags behind other countries in its focus on primary care. Countries with primary care-based health systems have population health outcomes that are better than those of the U.S, often at lower costs.ⁱⁱ There are indeed shortages of certain kinds of subspecialists, namely psychiatrists and some pediatric subspecialists; however, the overwhelming need in rural areas is access to primary care services. Expanding medical school slots and building new medical schools will not fix this composition problem if it is the only policy response.

Problems with Distribution: Professionals in most states are unevenly distributed, leaving many rural areas lacking access to a variety of health professionals. Although 21 percent of the population lives in rural areas, less than 11 percent of the nation's physicians practice there. About 20 percent of the United States population reside in federally designated "primary care health professional shortage areas (HPSAs)." Some 50 million people live in more than 2,900 health professions shortage areas; 29 million people are underserved, most of them in predominantly rural counties. To alleviate these gaps in access to basic health care (and eliminate primary care HPSAs), we would need 7,270 primary care physicians willing to serve in these areas.ⁱⁱⁱ

Medical School Expansion, continued

What is Family Medicine and why is it so well-suited to rural healthcare needs?

**FAMILY MEDICINE:
The Distributional
Specialty**

**What is the “pipeline”
to rural physician
recruitment and
retention?**

Family medicine is unique in its provision of continuing, comprehensive health care for the individual and family. It is a specialty that integrates the biological, clinical and behavioral sciences. The scope of family medicine encompasses all ages, sexes, each organ system and every disease entity.^{iv} The specialty of family medicine has been demonstrated to lower the costs of care, improve health through access to more appropriate services, and reduce inequities in the population’s health.^v

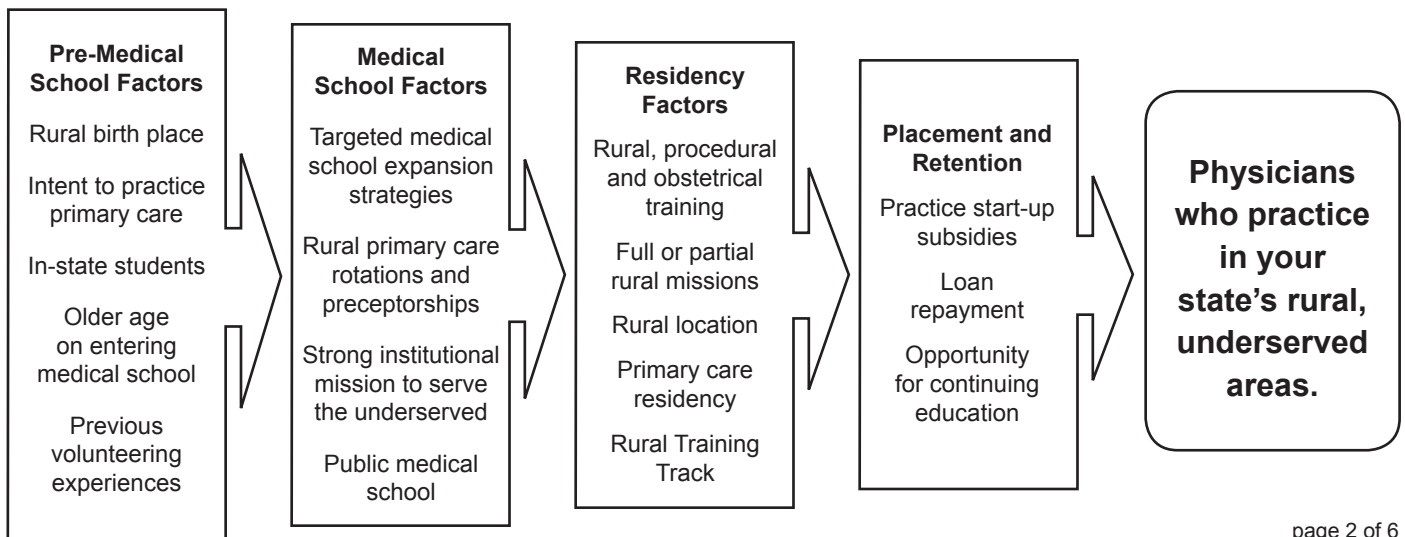
Family medicine graduates, more than those of any other specialty, **distribute similarly to population distribution.**^{vi} Millions of people in all segments of society in the United States rely on family physicians as their usual source of care. As early as the 1970s, research has shown a clear propensity for family medicine residency graduates to practice in rural settings at a higher rate than any other specialty. In fact, **family physicians supply 58 percent of physicians in isolated rural areas.**^{vii} While rural areas are not the exclusive domain of family medicine, family medicine’s tradition of service to this population, training in maternity and newborn care, and willingness to accept patients of any age or sex have made **family physicians critically important for people in rural areas.** Most other physician specialties do not have a business model that can be supported in rural areas. Limiting care by age, disease, or gender requires larger populations to produce enough patients to support a physician.

The term “rural pipeline” refers to the long and complex process of rural upbringing and education that leads a person to choose a career as a rural physician. The rural medicine pipeline addresses both recruitment and retention. Factors that increase the output of physicians practicing in rural areas can be explored at each of the advancing stages along the pipeline, which are diagrammed below.^{viii}

- Pre-medical school factors
- Medical school factors
- Residency factors
- Placement and retention

The overall goal is to provide quality physicians who practice in their state’s rural, underserved areas.

State policymakers have a unique opportunity to increase the recruitment and retention of rural physicians in their states through targeted policy at all levels of the rural workforce pipeline.



Medical School Expansion, continued

What do your state's future rural providers look like when they enter medical school?

Each state's rural health workforce is dependent on who gets into medical school. **Growing up in a rural area is the single most important independent predictor of rural medical practice.** However, the percentage of rural students in medical schools has fallen 47 percent since 1976. This decline occurred without any change in the percentage of rural applicants.^{ix}

Another factor strongly associated with future rural practice is the **student's expressed plan to eventually become a family physician.** When combined with rural origin, these two factors are associated with a 36 percent likelihood of a graduate's practicing in a rural area, compared with 7 percent for individuals without these characteristics.^x

State schools can also favor in-state students, whom are more likely to stay in-state after graduation.

What is the "ideal medical school" to meet your state's rural healthcare needs?

Evidence points to **three core features** of a medical school that may increase its likelihood of producing rural physicians:^{xi}

- strong institutional mission of serving rural and underserved areas
- targeted selection of students likely to practice in rural areas
- a focus on family medicine

Other features that are associated with the production of more physicians practicing in rural communities include: medical school location in a rural state, public ownership, rotations that focus on rural primary care, rural preceptorships, and specialized medical school curriculum for applicants with rural background or rural intentions.

What is the "ideal residency program" that trains physicians to meet your state's healthcare needs?

Residency programs that focus on family medicine with an integrated rural health component have more graduates who go on to practice in rural areas. Data from nearly all of the 367 family medicine residency programs in the United States from 1994-1996 show that programs that graduate more rural physicians tend to have

- (1) more required rural and obstetrical training months,
- (2) full or partial rural mission,
- (3) locations in states that were more rural, and
- (4) emphasis on procedural training.^{xii}

A particular type of family medicine program called the **One-Two Rural Residency Track** deserves special note. These tracks require residents to complete their first year of training in an urban center with years two and three in a rural community. Of the graduates in these programs between 1988 and 1997, 76% of graduates were found to be practicing in rural locations with 61% of these practicing in Health Professional Shortage Areas. Importantly, 72% of these respondents indicated their intentions to stay in their current locations indefinitely. However, many of these programs do not receive the funding typically given by Medicare for residency training, and many have been forced to close.

Medical School Expansion, continued

Is medical school expansion the solution to a shortage of rural physicians?

The Council on Graduate Medical Education (COGME) and the American Association of Medical Colleges (AAMC) recently called for a **15-30 percent increase** in medical school enrollment from the 2002 level over the next decade. COGME provides an ongoing assessment of physician workforce trends, training issues and financing policies, and recommends appropriate federal and private sector efforts on these issues. COGME advises and makes recommendations to the Secretary of the U.S. Department of Health and Human Services (HHS) and to the Senate Committee on Health, Education, Labor and Pensions, and the House of Representatives Committee on Commerce.^{xiii} The suggested 30 percent increase is equal to an additional 4,946 medical school matriculants per year.^{xiv} **This is a unique and timely opportunity.** The AAMC emphasizes the opportunity to affect physician distribution with this expansion, yet offers few ideas to guide policymakers.

A recent AAMC survey of expanding medical schools found that 89 percent were expanding **“to meet a perceived need or physician shortage in their state/region.”** However, only 26 percent of these same programs reported that their enrollment increases would be targeted to specific populations or communities.^{xv} The costs to states of making the investment required for this expansion is substantial and must be carefully directed to address public good and population needs.

Expansion by itself does not guarantee that physicians are distributed where they are most needed. Expansion without targeted distribution and composition strategies risk perpetuating the concentration of physicians in high income urban areas and medical centers, providing questionable benefit to rural America.

Physician workforce planning should **consider how we can improve health care for everyone in the United States and what workforce would be needed to do so.** Policymakers must ensure that services are provided in the most appropriate places by the most appropriate people. Rather than “shooting” at the right number, we have an opportunity to decide the types of services we want to produce and how we align the physician workforce to participate in delivering them.^{xvi}

What are the most effective uses of rural workforce funds for your state?

Solutions must be aimed at both selecting the right medical students and giving them the content and rural-setting experiences necessary to introduce them to and train them in rural primary care.

- **First, evaluate how your state is doing in meeting its rural physician workforce:**
 - How effectively are your state’s publicly supported medical schools producing physicians to meet public needs?
 - How can the state government improve the chances that your publicly supported medical schools will prepare physicians to meet public needs?
 - **Is my state training the right people with the right skills to go to the right places?**
- **See “Additional Resources” listed below for region and state specific statistics.** Every state in the U.S. is covered by a regional office of workforce studies. Contact your region’s workforce study center and let them know that you are interested in crafting state legislation that would best fit your state’s healthcare workforce needs.

Medical School Expansion, continued

Is medical school expansion the solution to a shortage of rural physicians? *continued*

- **Medical school admission policy is the key to increasing the number of graduates likely to practice in rural areas.** Pre-admission surveys of students' attitudes and specialty interests can help direct the selection of medical students who are familiar with and interested in rural communities.^{xvii} This is a long-term strategy that has the potential to close the gap between the supply of and the demand for physicians in rural areas. **Rural background is the single most significant personal characteristic influencing physicians' decisions to practice in rural locations.**^{xviii} Strategies to ensure that rural students are not disadvantaged by the admissions policy could include:
 - Providing scholarships and tuition relief to rural students
 - Including rural and primary care physicians on the admissions committee
 - Potentially applying a rural adjustment factor to grade point averages and Medical College Admissions Test scores
 - Setting medical school quotas for rural enrollment via the creation of a "Rural Medicine Track."
- **Medical school expansion needs to be strategic, targeting selection of students likely to practice in rural, underserved areas.** Any medical school expansion should be tied to a strong institutional mission with a focus on primary care and serving the state's underserved. Increased accountability of medical schools to achieve congruence between public need and the supply of physicians is necessary. **With the recent COGME and AAMC call for increased medical school admission, states have a unique opportunity to request that these increased admissions slots be filled with students most likely to fill the state's physician workforce needs.**
- Mandate that all third-year medical students complete a **clerkship in family medicine** and that **all primary care residents be required to be offered a rotation** in a rural setting. Texas is one state that has such a mandate.
- Develop and improve **linkages between community provider practice sites and health professional training programs.** Current education of students and residents occurs almost exclusively in large urban teaching hospitals, which rarely provides them with opportunities to learn about primary care delivered in rural settings. States have the power to require that some or all of Graduate Medical Education (GME) payments be linked to state policy goals intended to support primary care in underserved areas. In 2002, ten states required that some or all Medicaid GME payments be directly linked to state policy goals intended to vary the distribution of, or limit, the health care workforce. The goal of encouraging training of physicians in certain specialties (e.g., primary care) is applied to GME payments by all ten states. Five of the states use these payments to encourage training of physicians in certain settings (e.g., rural locations, and medically underserved communities).^{xix}
- **State Support-for-Service Programs** are one strategy to entice new physicians to practice in medically underserved areas. These state-sponsored programs include scholarships, service-option loans, loan repayment, direct financial incentives, and resident support programs.

Medical School Expansion, continued

Additional Resources

- National Center for Health Workforce Analysis.
<http://bhpr.hrsa.gov/healthworkforce/>
- Regional Centers for Health Workforce Studies:
 - Northeast: State University of New York at Albany
<http://chws.albany.edu/>
 - Southeast: University of North Carolina at Chapel Hill
<http://www.healthworkforce.unc.edu/>
 - North Central: University of Illinois at Chicago
<http://www.uic.edu/sph/ichws/>
 - South Central: University of Texas at San Antonio
<http://www.uthscsa.edu/rchws/index.asp>
 - Northwest: University of Washington
<http://depts.washington.edu/uwchws/>
 - Southwest: University of California at San Francisco
<http://futurehealth.ucsf.edu/cchws.html>
- National Conference of State Legislatures. Effective state incentives to encourage health care professionals to work in rural areas. May 2000.
<http://www.ncsl.org/programs/health/forum/caruralworkforce.htm>
- The National Rural Health Association. www.nrharural.org
- American Association of Medical Colleges Center for Workforce Studies.
<http://www.aamc.org/workforce/start.htm>

Notes

- i AAMC. AAMC Position Statement on the Physician Workforce. July 2006.
- ii Starfield B, et al. The effects of specialist supply on populations' health: assessing the evidence. *Health Affairs*. 15 March 2005.
- iii HRSA. August 2006.
- iv American Academy of Family Physicians. AAFP Policy Statement. Revised 2005. www.aafp.org
- v Starfield B, Shi L, Macinko. Contributions of primary care to health systems and health. *The Milbank Quarterly* 2005;83(3):457-502.
- vi Robert Graham Center Workforce Paper.
- vii Green LA, Doodoo MS, Ruddy M, et al. The physician workforce of the United States: a family medicine perspective. October 2004.
- viii Geyman, JP, Hart GL, Norris TE, Coombs JB, Lishner DM. Educating generalist physicians for rural practice: how are we doing? *J Rural Health*. 2000;16(1):56-80.
- ix Green LA. *Ibid*.
- x 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.
- xi Rabinowitz HK, Paynter NP. The role of the medical school in rural graduate medical education: pipeline or control valve? *J Rural Health*. 2000;16:249-53.
- xii Bowman RC, Penrod JD. Family practice residency programs and the graduation of rural family physicians. *Fam Med*. 1998;30:288-92.
- xiii Council on Graduate Medical Education (COGME). 2006. www.cogme.gov
- xiv AAMC. AAMC Position Statement on the Physician Workforce. July 2006.
- xv AAMC. Medical school expansion plans: results of the 2005 survey of U.S. medical schools. April 2006.
- xvi Phillips RL, Martey D, Jaen CR, Green LA. COGME's 16th report to Congress: too many physicians could be worse than wasted. *Ann Fam Med* 2005;3(3):268-270.
- xvii 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. *Academic Med* 2002;77(8):790-798.
- xviii Rabinowitz HK, et al. *Ibid*.
- xix Henderson T. Medicaid Direct and Indirect Graduate Medical Education Payments: A 50-State Survey (Washington, DC: Association of American Medical Colleges, December 2003).