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

AAFP Government Relations *June 2007*

"Family medicine symbolizes a commitment to a style of practice that is focused on the patient, the family and the community, rather than on the disease. Family medicine has found a niche at the interface of scientific medicine and public service."

— John W. Saultz, *Textbook of Family Medicine*

What is family medicine?

State policy-makers play a 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 health care needs of states and the nation.

What are the current policy issues in the health care workforce?

Health care workforce policy debate is frequently reduced to a single issue:

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

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

- **Composition:** Which types of health care workers with what skills are needed to meet population needs?
- **Distribution:** Where would health care 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 health care workforce talk has focused solely on supply - whether the United States will face a surplus or shortage of physicians in the near future[a]. The American Association of Medical Colleges (AAMC) recently called for a 30 percent expansion of medical school enrollment from the 2002 level of approximately 16,400 over the next decade. **While ensuring adequate supply is a valuable consideration, policy-makers must additionally consider issues of composition and distribution of physicians in their states.** Nowhere 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 United States, often at lower costs[b]. There are indeed shortages of certain kinds of subspecialists (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 without access to a variety of health professionals. Although 21 percent of the nation's population lives in rural areas, less than 11 percent of the nation's physicians practice there. About 20 percent of the U.S. population resides in federally designated "primary care health professional shortage areas (HPSAs)." Some 50 million people live in more than 2,900 HPSAs; 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), would take an additional 7,270 primary care physicians willing to serve in these areas[c].

Medical School Expansion, continued

What is family medicine and why is it so well-suited to rural healthcare needs?

FAMILY MEDICINE: The Distributional Specialty

Family medicine is unique in its provision of continuing, comprehensive health care for individuals and families. 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[d]. 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[e].

Family medicine graduates, more than those of any other specialty, **practice where the people are, rather than clustering near urban areas and academic health centers like other specialties[f].** 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.** 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[g].** 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.

Family medicine is unique in its provision of continuing, comprehensive health.

What is the "pipeline" to rural physician recruitment and retention?

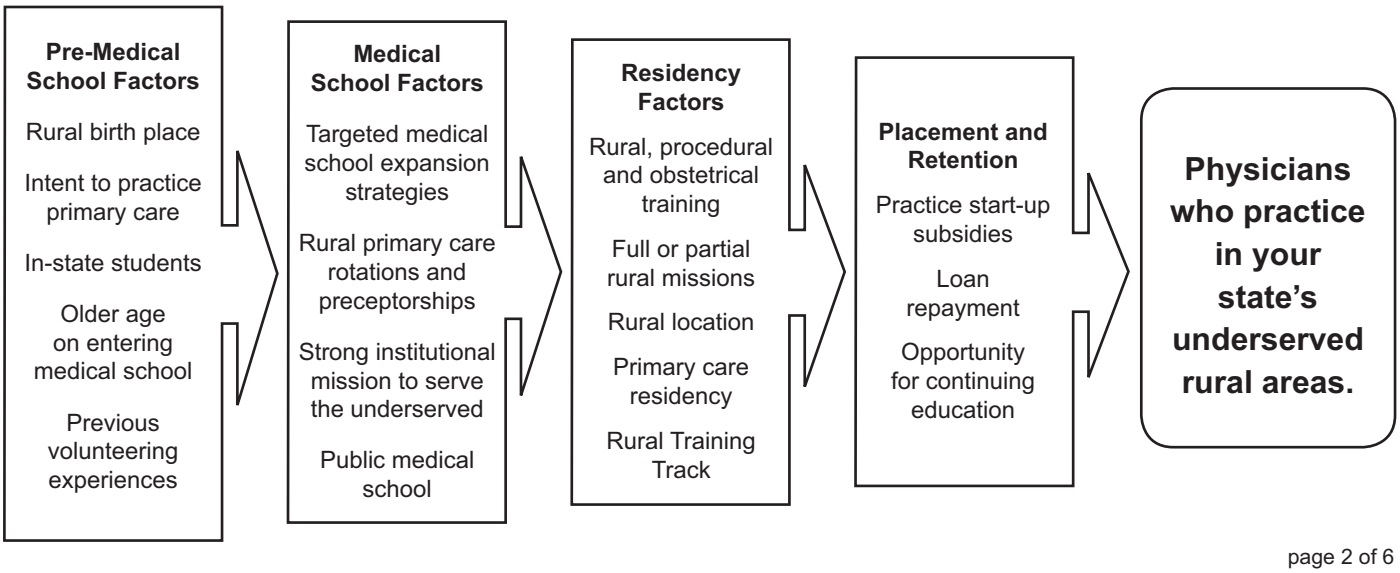
The term "rural pipeline" refers to the long and complex process of rural upbringing and education that leads a person to choose a career as a rural physician. The rural medicine pipeline addresses both recruitment and retention. Factors that increase the output of physicians practicing in rural areas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

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

The overall goal of supporting a rural pipeline is to provide quality physicians who practice in their state's underserved rural areas.

State policy-makers 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.

Factors Supporting the Rural 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 depends on who gets into medical school in the state. **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[i].

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 that a graduate will practice in a rural area, compared with a seven percent likelihood for individuals without these characteristics[j].

State schools can also favor in-state students, who 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** that may increase a medical school's likelihood of producing rural physicians[k]:

- 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 intentions to practice in rural areas.

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 contain 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) a full or partially rural mission;
(3) locations in states that are more rural; and
(4) an emphasis on procedural training[l].

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 and years two and three in a rural community. Of the graduates in these programs between 1988 and 1997, 76 percent were found to be practicing in rural locations with 61 percent of these practicing in HPSAs. Importantly, 72 percent of 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 percent to 30 percent increase in medical school enrollment from the 2002 level of approximately 16,400 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), the Senate Committee on Health, Education, Labor and Pensions, and the House of Representatives Committee on Commerce[m]. The suggested 30 percent increase is equal to an additional 4,946 medical school matriculants per year[n]. **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 policy-makers.

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[o]. The costs to states of making the investment required for this expansion is substantial and must be carefully directed to address the 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 risks 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.** Policy-makers 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[p].

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 the "Additional Resources" listed below for region and state specific statistics.** Every state in the United States 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 health care workforce needs.

- **The 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[q]. 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**

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

influencing physicians' decisions to practice in rural locations[r]. 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 admissions committees
- Applying a rural adjustment factor to grade point averages and Medical College Admissions Test (MCAT) scores
- Setting medical school quotas for rural enrollment via the creation of a "rural medicine track."

- Medical school expansion needs to be strategic, targeting a 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 **links 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 provide 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, 10 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 10 states. Five of the states use these payments to encourage training of physicians in certain settings (e.g., rural locations, and medically underserved communities)[s].

- **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.

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

[a] AAMC. AAMC Position Statement on the Physician Workforce. July 2006.

[b] Starfield B, et al. The effects of specialist supply on populations' health: assessing the evidence. Health Affairs. 15 March 2005.

[c] HRSA. August 2006.

[d] American Academy of Family Physicians. AAFP Policy Statement. Revised 2005. www.aafp.org

[e] Starfield B, Shi L, Macinko. Contributions of primary care to health systems and health. The Milbank Quarterly 2005;83(3):457-502.

[f] Robert Graham Center Workforce Paper.

[g] Green LA, Dodoo MS, Ruddy M, et al. The physician workforce of the United States: a family medicine perspective. October 2004.

[h] 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.

[i] Green LA. Ibid.

[j] 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.

[k] 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.

[l] Bowman RC, Penrod JD. Family practice residency programs and the graduation of rural family physicians. Fam Med. 1998;30:288-92.

[m] Council on Graduate Medical Education (COGME). 2006. www.cogme.gov

[n] AAMC. AAMC Position Statement on the Physician Workforce. July 2006.

[o] AAMC. Medical school expansion plans: results of the 2005 survey of U.S. medical schools. April 2006.

[p] 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.

[q] 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.

[r] Rabinowitz HK, et al. Ibid.

[s] Henderson T. Medicaid Direct and Indirect Graduate Medical Education Payments: A 50-State Survey (Washington, DC: Association of American Medical Colleges, December 2003).

Sources

"AAMC Statement on the Physician Workforce." June 2006. www.aamc.org/workforce/workforceposition.pdf.

Carlisle R. "Financing and budgeting of community-based family medicine residency programs." South Med J. 2006 Jun; 99(6):576-8.

Edwards JB, Wilson JL, Behringer BA, Smith PL, Ferguson KP, Blackwelder RB, Florence JA, Bennardr B, Tudiver F. "Practice locations of graduates of family physician residency and nurse practitioner programs: considerations within the context of institutional culture and curricular innovation through Titles VII and VIII." J Rural Health. 2006 Winter;22(1):69-77.

Franzini L, Monteiro FM, Fowler GC, Low MD. "A cost construction model to assess the cost of a family practice residency program." Fam Pract Manag. 2000 Jun; 7(6):39-42.

Goodwin MC, Gleason WM, Kontos HA. "A pilot study of the cost of educating undergraduate medical students at Virginia Commonwealth University." Acad Med. 1997 Mar;72(3):211-7.

Hurt MM, Harris JO. "Founding a new College of Medicine at Florida State University." Acad Med. 2005 Nov;80(11):973-9.

Kinnally N. "FSU College of Medicine moves to new $60 million complex." www.fsu.com/pages/2004/10/29/medschool_move.html. 2000.

Lapolla M, Brandt EN Jr, Barker A, Ryan L. "The economic impacts of Oklahoma's Family Medicine residency programs." J Okla State Med Assoc. 2004 Jun; 97(6):248-51.

Pathman DE, Konrad TR, King TS, Taylor DH Jr, Koch GG. "Outcomes of states' scholarship, loan repayment, and related programs for physicians." Med Care. 2004 Jun;42(6):560-8.

Rein MF, Randolph WJ, Short JG, Coolidge KG, Coates ML, Carey RM. "Defining the cost of educating undergraduate medical students at the University of Virginia." Acad Med. 1997 Mar; 72(3):218-27.

Starfield B, Shi L, Macinko J. "Contribution of primary care to health systems and health." Milbank Q. 2005;83(3):457-502.

Temple University School of Medicine. http://www.temple.edu/medicine/about/new_building.htm. 2006

Gonzalez EH, Phillips RL Jr, Pugno PA. "A study of closure of family practice residency programs." Fam Med. 2003 Nov-Dec;35(10):706-10