National Rural Health Association

Issue Paper

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Recruitment and Retention of a Quality Health Workforce in Rural Areas:

A series of Policy Papers on The Rural Health Careers Pipeline
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Introduction and Background:

Surveys of rural physicians suggest that their practices still have increasing levels of satisfaction. This is derived in part from a feeling of their services being essential and deeply appreciated by their community.[1] Rural practice also allows physicians to practice a broader range of primary care. It continues to present an exciting challenge to daily practice as well as providing a level of continuity of patient care. Urban specialists are more procedurally oriented and rarely get to know a patient over time. In rural practices, there tends to be less managed care and business influences forcing patients to change physicians yearly. The financial impact of rural practices, medical scope of practice, lack of residency preparedness, and the perceived isolation make recruitment of physicians difficult.[3] Rural hospitals suffer under the inequities in hospital payments from payer sources.[2] The rural poor are less likely to be covered by Medicaid benefits, have prescription coverage or have employer provided health care coverage.[4]

With the challenges of hospital payments, continuity of care and the rural poor, rural communities find themselves at increasing disparities with urban centers. Of the U.S. population, 25 percent live in rural communities, but only 10 percent of physicians in general practice work in these rural communities. Approximately 25 percent of family physicians reside in rural communities.[4] The estimates of U.S. growth from 1970 to 2020 indicate the population will increase by 63 percent while total physicians will increase by 276 percent (from 292,000 to 1.1 million).[3] During this time the gain in family physicians will only be 56 percent (56,000 to 95,000).[3] This change reflects the increasing specialization of physicians who, are even less likely to practice in a rural community with the lower population densities and marginal economics. If current trends continue, the rural recruitment of family medicine will worsen and become more of a crisis. This crisis will not only be from the primary care shortage, but from an increased mortality associated with specialization. The supply of family physicians is associated with a significantly lower all-cause mortality compared to a greater supply of specialty physicians being associated with higher mortality.[5]

There has been a 30-year decline in interest in family medicine related to U.S. medical students being less rural, less connected to state and local areas, and a perception of students being more intellectual in orientation.[6] As a result, over half of family medicine residency positions are occupied by students educated in other countries.[6] Medical students are aware of the less than supportive treatment of family medicine by government, insurance companies, subspecialty and emergency physicians, accrediting bodies, medical leadership, and medical schools.[6] Medical students also face an added financial burden of medical school debt ($120,000 average).[13] The rural patient mix of higher Medicare/Medicaid along with the low reimbursement rates for primary care services make it difficult for students to pay that debt

load off in a reasonable period of time, thus influencing their choice of specialty and practice location.

In 2004, a non Metropolitan Service Area (MSA) had one family physician or general practitioner for every 2,940 persons and, if you include general internal medicine and pediatrics, a non-MSA had one physician for every 1,810 persons. You can see the rural disparity if you note that the United States as a whole had one primary care physician per 1,321 persons.[17] Again, in 2004, there were only 36 percent of the 936,000 physicians in the United States that were in primary care (family medicine/general practice, internal medicine and general pediatrics) and osteopathic physicians composed 5 percent of this primary care base. Of those osteopathic physicians, 41 percent were family physicians/general practitioners of the 55 percent that were in primary care.[18] Those physicians who choose to practice in rural communities are more likely to be family physicians than other specialties.[7] Family medicine graduates compose about 90 percent of rural primary care physicians and are the only specialty that mirrors the same geographic and socioeconomic pattern as the U.S. population.[1] Review of NHSC participants demonstrated the highest retention rates were for family medicine with higher rates for longer service periods.[9] Family medicine graduates are office based 87-92 percent of the time, compared to 76 percent for pediatrics and 50 percent for internal medicine. In addition, family physicians remain in their specialty at rates higher than non-family physicians.[10]

The managed care era of the 1990s impacted graduating medical school classes between 1994-1998 in favor of primary care and family medicine. This resulted in an increase in primary care from 28 percent to 41 percent with family medicine/general practice increasing from 7 percent to 16 percent.[3] Rural family medicine saw a 42 percent increase.[3] During this time, the United States had the best access for health care to the underserved and rural because of the managed care influence on primary care and the concerns of limited jobs for highly paid specialists. Rural location choice began to fall in the late 1990s with the 2004 American Medical Association (AMA) Masterfile demonstrating the lowest levels ever for the class graduating in 2000.[3] There seems to be no indication of improvement in this downward trend for the medical student choice of rural primary care.

Issues:

1. Attitudinal and Environmental Factors

The cost of health insurance has led businesses to continue to shop for insurance plans, virtually eliminating continuity of care for patients in areas of high insurance plan penetration. As a result, physicians are less familiar with their patients and patients are not given the time needed to build a level of trust in their doctors. This leads to more doctor shopping and unnecessary testing which also increases the cost of medical care unnecessarily. Because of reduced penetration of HMO and PPO plans, rural communities are some of the only remaining areas for continuity of care.

With the threat of lawsuits, the teaching environment has been changing with supervising teachers being less likely to trust students with patient care decisions and procedures resulting in a more passive observational learning system. This negatively impacts medical education and reduces opportunities for students to gain a positive experience in rural preceptorships.

2. Educational and Informational Factors

Rural health care's disparities in physician access can be answered by improving recruitment of all primary care providers. The best single specialty to answer this rural health care disparity is family physicians.[1] As already stated, family medicine graduates compose 90 percent of current rural primary care physicians. They have the highest recruitment and retention rates with the highest likelihood of practicing in the underserved and rural areas.[3,8] Predictors for rural primary care and retention include growing up in a rural area, male gender, having a National Health Service Corps scholarship, a freshman-year plan for family medicine and taking an elective senior family practice rural preceptorship. Few graduates without the factors of growing up rural and freshman-year plans for family practice were rural primary care physicians (1.8 percent).[11]

There has been 47 percent fewer rural born medical students over the last 25 years and a decline of rural background admissions from 27 percent to 11 percent (AAMC GQ 1980-1999).[6] Medical schools have 10 percent fewer lower-income students per year and are increasing the number of admissions of students from counties of over one million population.[3] There is concern that 97% of medical school education occurs in metropolitan areas and 90 percent of medical students are from urban areas. It's no surprise that 90 percent of physicians choose to practice in urban areas.[3] Of the medical students, few are interested in serving the underserved and locating in rural communities. It is the older student that is more likely to choose family medicine and rural locations.[3]

Factors that contribute to more admissions of rural-born students include primarily the percentage of rural students graduating high school and continuing on to college and to a lesser extent special admission tracts for medical school admission of rural students.[9] Medical schools that produce the highest percentage of rural graduates are located in rural states, publicly owned, produce more family physicians and receive lesser amounts of funding from the National Institutes of Health.[7]

3. Residency Programs

Of the 474 family medicine training programs nationally, there are 143 rural fellowships and 29 rural training tracts.[1] There is a wide variation of scope of practice in residency to residency. Rural training tracts have 76 percent of their graduates remaining in rural locations and 61 percent are in Health Professional Shortage Areas (HPSA's).1 These physicians remain near their residency 45 percent of the time and 39 percent of them are near their hometowns.[1] Rural training tracts have the best record for placement of residents in rural areas. In 2004, the National Resident Match Program fill rate for family medicine was 94 percent.[12] There has been an increase in those slots being filled with international graduates from 15 percent in 1998 to 38 percent in 2004, with a total makeup of the U.S. family medicine workforce of 16 percent.[12] The fill rate for US seniors in family medicine in the 2006 residency match was 41.5 percent, with a steady decline noted from 1996 to 2003 with a leveling since then at 41-42 percent.[19] A similar stabilization was seen in other primary care specialty fill rates in the 2006 match. The decreased fill rate for U.S. seniors demonstrates the decreasing interest in family medicine and primary care practices with a preference for medical subspecialties among U.S. medical students.[19]

Rural training presents some unique educational challenges. Residents in rural training tracts acquire skills to diagnose and treat problems unique to rural areas. They learn rural specific topics including: obstetrics and gynecology; trauma and emergency care; critical care; occupational health; community-oriented care; psychiatry; orthopedics; sports medicine; detailed procedural skills including colonoscopy and esophagogastroduodenoscopy; and surgical skills, including surgical assisting and postoperative care.[1] These topics help to provide a more rounded education for rural physicians and can promote a comfort level for novice physicians in the challenging environment of rural medicine.

The retention of family medicine physicians depends upon: the size and geography of the state recruiting; the birth origins of the physician (rural); the perceptions of the state toward rural health care; the population distribution in the state; the status of state education and health policies; the health policy of the neighboring states and the nation; and the current workforce needs for and market impacts on family medicine practice and training.[10] Well motivated and knowledgeable leadership in local communities provide an intangible edge in retaining quality physicians and their families.

4. Financial Factors

If we look at the economic impact of rural health care we find that for each additional 100 rural family physicians there is a $100 million per year impact on those rural communities.[6] This impacts rural health care jobs and preserves rural health related facilities. Declines in rural physicians devastates education, population, and quality of life, thus reducing new jobs and local businesses.[10] Once communities are affected by this economic impact, they have a tremendous uphill battle finding the resources to support a salaried practice that new graduates

seek.[10] The cost of medical education has reached unprecedented levels with the average medical school debt of students now averaging $120,000.[13] Medical students report that the most marked influence for avoiding careers in primary care is debt loads greater than $150,000.[14] Minority students report having higher levels of debt.[14] Given these reports, it is of no surprise that they choose a subspecialty with a salary of $300,000, instead of primary care with a salary of $120,000.[15]

Summary:

The rural health care crisis is an early indicator of a much larger problem. It seems most of the general population believes that care from a subspecialist is the best care and that with more technology comes better care. This mode of thinking can lead to an unreasonable cost of care.[16] Family medicine practitioners can deal with 80 to 85 percent of the patients' medical problems and understand the interaction of all systems, including mental health, social issues and community health care. Limited care specialists have a more narrow focus of care and tend not to look outside their area of expertise for answers to patient problems.

Improvement in rural health care is dependent upon recruiting primary care and other providers. Physician recruitment is dependent on improving rural interest among medical students. As outlined above, multiple factors such as: rural born, age of the student, pre-medical school education (primary, secondary and college), medical school debt, and expected income upon entering practice can affect a medical student's decision on the type of practice they wish to pursue. If academic health centers are to positively impact this problem, they need to select more students into allopathic and osteopathic schools who will likely choose a rural career.

A major factor in recruiting rural students into medical school is state education for rural students.[6] States with education and health policies that results in better graduation and retention of family physicians tend to have more teachers and young professionals.[6] As a result, they have lower health care costs and have prioritized investments in children, education, and health care. These states include: Dakotas, Nebraska, Kansas, Minnesota, Wisconsin, Iowa, Vermont, Montana, Utah, Idaho, Hawaii, Oregon, West Virginia, and Arkansas.[10] Influencing the career choice of students begins with a pipeline toward medical education.[4] Developing this pipeline requires adequate funding for development of a health careers program for students in rural primary and secondary schools. This health careers program must enable adequate college preparation that improves the likelihood for rural student admission to medical schools. Preparation can be measured by improvement in MCAT scores for rural students and subsequent medical school admission.

If there was a shift in priority toward clinical evaluation and management (E&M) code reimbursement, then medical students would receive the message that primary care is valued in our health care system. Improved reimbursement is dependent on the evaluation and management codes developed by the AMA and used by the insurance industry, including Medicare and Medicaid. This would begin shifting reimbursement away from our current procedurally oriented system.

Recommendations:

- Academic health centers need to select more students into allopathic and osteopathic schools who are more likely to choose rural careers, keeping in mind the multiple determining factors of rural born, student age, premedical education, medical school debt and expected practice income.
- Promote and support high quality health careers programs in rural primary and secondary schools to ensure adequate college preparation for the rural student. This will strengthen the pipeline toward medical education and improve the likelihood for rural student admission to medical schools. The preparation can be measured by improvement in the Medical College Admissions Test (MCAT) and medical school admissions of rural students.
- Shift the reimbursement more toward the evaluation and management codes developed by the AMA and used by Medicare, Medicaid and the insurance industry.

The NRHA supports:

1. State and federal education funding for primary and secondary rural schools with emphasis on increased performance in science and math competencies. This should include distance learning technologies.
2. Establishing a clearinghouse for sharing of information on best practices for recruitment of rural youth to medical school and primary care fields, emphasizing family medicine.
3. Expansion of federal and state supported higher education financing for disadvantaged rural students seeking health careers.
4. Expansion of federal and state support for medical education that achieves better primary care and distribution outcomes (measured by practicing physicians, not students entering residencies). This should include locating a meaningful portion of medical education in rural communities and linking federal and state medical school funding to distribution outcomes.
5. Fully fund and restore Title VII funding for area health education centers, family medicine training/research, Health Education Training Centers, Health Careers Opportunity Programs, Quentin Burdick Interdisciplinary Training in Rural Areas and Geriatric Education Centers..
6. Applying Medicare/Medicaid cost reductions such that evaluation and management CPT codes receive an increase in funding with an off setting reduction in the remaining codes to equalize the total funding reductions. This increases the value placed on clinical skills which will improve primary care reimbursement while allowing continuing budget reductions.
7. Advocate for emphasis and initiatives to increase admissions of rural students and increase "pipeline" programs, funding and support.

References:

[1]. American Academy of Family Physicians. (2001). Rural practice: Family medicine graduate medical education training for rural practice. Retrieved May 5, 2006 from http://www.aafp.org/online/en/home/policy/policies/r/fammedruralpractice.html

[2]. American Academy of Family Physicians. (2005) Rural health care. Retrieved May 5, 2006 from http://www.aafp.org/online/en/home/policy/policies/r/ruralcare.html

[3]. Bowman RC. (n.d.). Physician workforce studies. Retrieved May 5, 2006 from http://unmc.edu/Community/ruralmeded/physician_workforce_studies.htm

[4]. National Rural Health Association. (2006). Recruitment and retention of a quality health workforce in rural areas: Number 7 - Rural health careers pipeline: K-12. Retrieved May 5, 2006 from http://www.nrharural.org/advocacy/sub/issuepapers/0206workforceNo7.pdf

[5]. Starfield B., Shi L., Macinko J. (2005). Contribution of primary care to health systems and health. *The Milbank Quarterly*, 83, 457-502.

[6]. Bowman R.C. (n.d.). Rural workforce and health policy in the United States. Retrieved May 5, 2006 from http://unmc.edu/Community/ruralmeded/rural_workforce_health_policy.htm

[7]. Rosenblatt R.A., Whitcomb M.E., Cullen T.J., Lishner D.M., Hart L.G. (1992). Which medical schools produce rural physicians? *JAMA*, 268, 1559-65.

[8]. Phillips R.L., Fryer G.E., Ruddy G.R., et al. (2005). Physician workforce: The special case of health centers and the National Health Service Corps. Retrieved May 5, 2006 from http://www.graham-center.org/x582.xml

[9]. Cullen T.J., Hart L.G., Whitcomb M.E., Rosenblatt R.A. (1997).The National Health Service Corps: Rural physician service and retention. *J Am Board Fam Pract*, 10, 272-9.

[10]. Bowman R.C. (n.d.). Retention of family physicians. Retrieved May 5, 2006 from http://unmc.edu/Community/ruralmeded/retention_of_family_physicians.htm

[11]. Rabinowitz H.K., Diamond J., Markham F. and Paynter B.S. (2001). Critical factors for designing programs to increase the supply and retention of rural primary care physicians. *JAMA*, 286, 1041-1948.

[12]. Klein L.S., Ruddy G.R., Phillips R.L., et al. (2005). Who filled first-year family medicine residency positions from 1991 to 2004. Retrieved May 5, 2006 from http://www.graham-center.org/x583.xml

[13]. American Medical Student Association. (n.d.). Medical student debt reaches unmanageable levels. Retrieved May 5, 2006 from http://www.amsa.org/meded/studentdebtfacts.cfm

[14]. Rosenblatt R.A., Andrilla C.H. (2005). The impact of US medical students' debt on their choice of primary care careers: An analysis of data from the 2002 medical school graduation questionnaire. *Acad Med,* 80, 815-9.

[15]. Lowes R. (2004). Exclusive Survey Earnings: Primary care tries to hang on. *Med Econ*, 81, 52-4.

[16]. Larson E.B., Roberts K.B., Grumbach K. (2005). Primary care, generalism, public good: Déjà vu? Again! *Ann Intern Med*, 142, 671-74.

[17]. The Family Physician Workforce: The Special Case of Rural Populations. July 2005. Number 31. Retrieved 2006. http://www.graham-center.org/onepager31.xml

[18]. Osteopathic Physicians and the Family Medicine Workforce. August 2005. Number 34. Retrieved 2006. http://www.graham-center.org/onepager34.xml

[19]. 2006 Match Summary and Analysis. Prepared by the Division of Medical Education, American Academy of Family Physicians, (Data Source: National Resident Matching Program. March 16, 2006. (Accessed May 31, 2006) http://www.aafp.org/match/nrmpinfo.html#1

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