Literature Review of Recruitment and Retention for Rural Health Care Providers

Talley RC. Graduate medical education and rural health care. Acad Med 1990;65: 522-525.

Reviews and explores 4 assumptions or truths in rural physician workforce research:

1. Students from rural areas are more likely to train in primary care and practice in rural areas
2. Residents who have a significant part of residency training in rural areas are likelier to practice in rural areas.
3. Family Medicine is the key to rural health
4. Residents practice close to where they train

Discusses why #2 is true – experience can dispel myths about rural life, role models that are positive about rural practice. Programs such as NHSC which require rural service, only successful in short term.

Rosenblatt RA, Whitcomb ME, Cullen TJ, Lishner DM, Hart LG. Which medical schools produce rural physicians? JAMA 1992;268: 1559-1565.

Four variables strongly associated with medical schools producing rural graduates:

- Location in rural state
- Public Ownership
- Strong Family Medicine program/Family Physician producing
- Smaller amounts of funding from NIH

Discussed:

- More specialized physicians are less likely to practice in rural areas (52% of rural doctors were in fam. Med, gen IM or gen peds (esp fam med))
- Women less likely than males to practice in rural areas
- Rural is not homogenous – e.g. rural counties adjacent to metro areas have more MDs

Recommendations:

- Increase interest in family medicine
- Admission policies that favor rural students
- Innovative curricular experiences

Rabinowitz HK, Diamond JJ, Markham FW, Paynter NP. Critical factors for designing programs to increase the supply and retention of rural primary care physicians. JAMA. 2001;286(9):1041–8.

Purpose of study was to identify factors predictive of rural primary care supply and retention as well as to determine which components of Physician Shortage Area Program (PSAP) at Jefferson Medical College

affect outcomes.(Note – analysis conducted on two datasets but questions changed so some variables only available for certain years.)

PSAP recruits and selectively admits students from rural areas who have a firm commitment to practicing family practice in similar area. Facets include: faculty advisors, small financial aid, 3rd year family medicine clerkship in rural location, senior year outpatient subinternship (preceptorship) in family medicine, expected to complete family practice residency but no mechanism to enforce compliance
Five factors independently predictive of practicing in rural primary care:

- Freshman year plan for family practice
- Being in PSAP
- Having an NHSC Scholarship
- Male sex
- Selecting senior year rural family preceptorship (only factor not available on entry to med school)
- Among the subset asked about background, growing up in rural area also independently predictive

In terms of retention, the following factors were independently predictive of retention in rural primary care practice:

- Being in the PSAP
- Attending college in a rural area

Among PSAP graduates, taking a rural preceptorship and having an NHSC scholarship were univariately predictive of rural primary care practice, but only the former was predictive in 2 factor model
Non-PSAP graduates who had grown up in a rural area and had a freshman year plan for family practice were 78% as likely to practice rural primary care as PSAP graduates (20% vs 26%, respectively)
Take Home Points:

- Powerful impact of background and career plans at time of admission to medical school on future rural primary care practice and retention – most of the predictive factors available upon entry to med school
- This plus the fact that non-PSAP students from rural areas and with freshman plans for family practice (2 key selection criteria for PSAP) were about 75% as likely to practice rural primary care → admissions component of PSAP is most important reason for positive outcomes.
- But some of the success due to PSAP program itself since participants 25% more likely.
- Senior year rural family medicine preceptorship only predictive factor not known at matriculation – but unclear if those already planning rural primary care chose this preceptorship or if it influences career path
- Family practice was only primary care specialty choice at matriculation that was predictive of rural primary care practice
- JMC graduates that combined rural background with freshman year plans for family practice were more than twice as likely to become rural primary care physicians as those with one of these.
- PSAP was only independent factor in practice *and* retention.
- NHSC predicted primary care but not retention – suggests short term impact

Lessons:

- Develop strategies that increase medical school matriculants who grew up in rural areas and plan to practice family medicine (and have other premedical predictors)
- Curricular support, mentoring and financial support should be provided to support these students

- Reframe key policy question from "What can be done during medical school" to "what can medical schools do" to address rural primary care shortages

Woloschuk W, Tarrant M. Does a rural educational experience influence students' likelihood of rural practice? Impact of student background background and gender. Med Educ. 2002;36(3):241–7.

Studied impact of a 4-week, mandatory rotation (family medicine clerkship) in final year of 3-yr program at University of Calgary

- Rural education experience at medical school level increases stated likelihood of student participation in rural locums – need to confirm what this is in Canadian system
- Students with rural background more favorable toward rural practice (at pre and post)
- Admissions policies that favor rural students should be considered
- Nurturing rural background students intentions also important e.g.
    - Rural experiences
    - Mentoring with rural physicians
    - Rural research electives
    - Rural student interest group

Curran V, Rourke J. The role of medical education in the recruitment and retention of rural physicians. Med Teach. 2004;26(3):265–72.

Recruiting and retaining physicians harder in rural communities. Populations of rural communities tend to be older, sicker, lower SES status.

Individual factors related to becoming a rural physician:

- Background
- Exposure to rural communities during training
- Financial and Professional considerations
- Lifestyle issues – partners, family, on call schedule, more/less responsibilities

Medical School Factors associated with graduating physicians who practice in rural areas:

- Decentralized
- Located in rural regions/states
- Encourage admission of rural students
- Rural focus/Facilitate rural oriented medical curriculum
- Provide early and repeated learning experiences
- Mission, Location, Faculty composition and Curriculum components

Main strategies which medical schools can adopt to support efforts in the recruitment and retention of rural physicians include:

1. Academic outreach programs to stimulate interest in medicine as a career among rural students
2. Active recruitment of rural students and admissions policies that favor students of rural background with an interest in family medicine
3. Exposure to positive, rural-physician role models
4. Rural practice learning experiences at the undergraduate and postgraduate training levels
5. Advance procedural skills training and commitment to the provision of accessible and flexible CME via distance education

Adams ME, Dollard J, Hollins J, Petkov J. Development of a questionnaire measuring student attitudes to working and living in rural areas. Rural Remote Health. 2005;5(1):327. Epub 2005 Mar 8

Survey of student attitudes to rural practice and life. Determined post rural placement factors were:

1. Friendliness and support in rural areas
2. Isolation and Socialization problems
3. Enjoyable aspects of living in rural areas (lifestyle)
4. Opportunities that working in rural areas provide – in terms of medical practice etc.

Tolhurst HM, Adams J, Stewart SM. An exploration of when urban background medical students become interested in rural practice. Rural Remote Health. 2006;6(1):452.

Studied what influences urban background students to develop an interest in rural practice. Rural doctors are 2-4 times more likely than urban doctors to have a rural background. Nevertheless, 34-67% of rural doctors have urban backgrounds. Pre-disposing factors that were important include:

- Social and geographical familiarity with areas
- Values/Altruism – those who want to work in underserved areas
- Work interests related to general practice
- Lifestyle preferences and leisure interests
- Close social relations – could be enabling (spouse from rural area, family background) or limiting factors (no work opportunities for spouse).

External factors that might influence them to develop an interest in rural practice:

- Previous rural experience
- Rural placements – multiple exposures because not all rural areas equal
- Role models
- Scholarship commitments
- University characteristics – location, student mix, faculty attitudes

If predisposed plus exposed to rural locations and role models → likely to develop an interest in rural practice.

Need to consider recruiting "predisposed" urban background students as part of strategy