Factors and outcomes in primary care physician retention in rural areas

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Abstract

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Background: This paper examines factors influencing physicians' decisions to practise in rural communities as well as the results of a programme focused on rural recruitment and retention.

Methods: Data from two sources were analysed and discussed: 1) telephone interviews with 20 of 33 (61%) recently located rural physicians regarding practice and community factors influencing their practice decisions and 2) a database of 107 graduates of a rural medical education programme who have been in practice for at least three years to examine specialty choice and practice location(s), including moves from their original practice sites.

Results: Most rural physicians in this study decided to practise in rural areas because of family ties. Eighty per cent of the physicians participating in the interviews mentioned no negative personal or family factors related to their community of practice. Outcome data on graduates from the rural medical education programme are encouraging. Over 70% opt for primary care and rural practice. Over 80% have remained in their original rural practice location.

Conclusion: Keys to success in rural physician retention seem to include identifying and recruiting medical students of rural origin and focusing on a healthy practice environment. Policy makers need to work with local government, schools and employers to offer programmes that provide information on health careers in rural areas and begin to identify local youth for induction in rural health care.

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Introduction

The World Health Report 2008 states the following:

> *There is today a recognition that populations are left behind and a sense of lost opportunities that are reminiscent of what gave rise, thirty years ago, to Alma-Ata's paradigm shift in thinking about health. The Alma-Ata Conference mobilized a "Primary Health Care movement" of professionals and institutions, governments and civil society organizations, researchers and grassroots organizations that undertook to tackle the "politically, socially and economically unacceptable" health inequalities in all countries. The Declaration of Alma-Ata was clear about the values pursued: social justice and the right to better health for all, participation and solidarity. There was a sense that progress towards these values required fundamental changes in the way health-care systems operated and harnessed the potential of other sectors.*[1]

Today, there is a call for renewed dedication to and implementation of a primary health care movement, one that aims to reduce disparities across the gamut from delivery of primary care services to addressing the underlying social determinants of health.[2]

Despite recognition of the problem and calls for action, there is the need for considerably more information that can be used in the development of strategies and policies that will reduce disparities and increase access to quality health care. A particularly important topic in this regard is better understanding of the issues in development of the health care workforce for rural and remote populations. In the United States, for instance, while 20% of the population resides in rural areas, less than 10% of physicians practise in these same locations.[3] Glasser and colleagues, in a study of rural hospital chief executive officers (CEOs), found that 86% reported shortages of physicians in their communities. Most prominently mentioned were the specialties of family medicine (64%), obstetrics-gynaecology (50%),

orthopaedic surgery (50%) and general internal medicine (46%).[4] Similarly, MacDowell et al recently examined CEO perspectives on physician and other health profession shortages throughout the United States. According to the responses of 355 rural hospital executive officers, physician shortages exist in 75% of rural communities in the US, with 73% of CEOs reporting shortages in two or more primary care specialties. Most notable are shortages in the specialties of family medicine (58%), general internal medicine (53%), psychiatry (47%) and general surgery (40%). Most often mentioned as allied health shortages were registered nurses (74%), physical therapists (61%) and pharmacists (51%). Many factors influence physician choices of whether or not to practise in rural locations, including personal background, educational preparation/curriculum and financial incentives.[5]

Rural residents are often in greater need than their urban counterparts. For instance, rural communities have higher rates of chronic illness and disability and a poorer general health status than urban communities.[6] Rural residents tend to be older and poorer than their urban counterparts.[7,8] Rural residents have more health issues and adverse outcomes, and chronic conditions are more prevalent in rural areas.[8] In addition, according to Healthy People 2010, injury-related deaths are 40% higher in rural communities than in urban communities, while heart disease, cancer and diabetes rates are also higher in rural areas.[9]

As already noted, the consequences of an inadequate and 'mal-distributed' health care workforce are not limited to the United States. Wagstaff describes the situation in developing countries as 'swimming against the tide': in rural sectors in these countries it is often more difficult to gain access to health services due to distance, transportation, road infrastructure and geographical factors.[10,11] Populations in rural locations tend to have fewer resources and less access to preventive health services such as immunisations, screenings, sanitation and clean water. Consequently, rural populations experience an increased prevalence in preventable conditions such as parasitic infections and complications of childbirth, and have higher infant and adult mortality rates.

Because the number of health care workers is already limited in rural and remote areas of developing countries, each loss of a health professional significantly decreases access to care.[12] Salfasky et al points to the out-migration of physicians from Africa, the Philippines, Haiti, Thailand, Jamaica, Pakistan, Bangladesh and others.[13] Hart et al point out that nearly one-quarter of all active physicians in the United States are international medical graduates (IMGs).[14] Ike refers to the phenomenon as the 'brain drain scourge'. He states that it must be brought to the front-burner of strategic policy decisions that would lead to a paradigm shift in political, social and economic conditions that will serve to curb the health workforce crisis.[15] Yet, levels of out-migration from developing countries, which rose in the past decade, are projected to further increase as health care workers such as physicians and nurses are 'poached' by other countries to fill their own shortages.[16]

Within this context, the results of one study designed to better understand factors in the retention of rural physicians and one programme established to increase the placement and retention of primary care physicians in rural communities are integrated in the present paper.

Methods

Two sources of data were used in this analysis. The first was a survey of graduates of the University of Illinois College of Medicine at Rockford practising in rural Illinois. The survey focused on the graduates' perspectives on rural practice. Twenty of 33 eligible graduates (61%), all in rural primary care, agreed to participate in the survey. The survey, consisting of eight open-ended questions, was administered over the telephone. Based on the literature on what influences rural practice choice and satisfaction, the following issues were addressed:

- family and personal background related to rural roots and sciences/general academic preparation for college;
- financing of medical school, role of special rural training in medical school related to rural practice, and primary care residency choice;
- personal decisions relating to spouse and role of support in identifying practice location that was a match professionally and for family;
- support offered to start or maintain graduate's practice, especially related to practice management and work/life balance;
- legislative support for adequate Medicare/Medicaid reimbursement; and
- access to opportunities for professional growth, education and contacts as well as the role of communication and technology/hospital capabilities.

A copy of the survey is available on request.

The second data source comprised longitudinal records maintained and updated annually on Rural Medical Education (RMED) programme graduates. The database consists of demographic information as well as information on graduates' residency specialty and location and, finally, practice specialties and locations. It is updated annually to ensure current information on all RMED graduates,

regardless of specialty choice. Thus longitudinal information on graduates going into primary versus specialty care as well as into rural versus non-rural practice locations is available. To date there have been 186 graduates of the RMED programme since 1997, with 107 in practice for at least three years. For this paper, the number and percentage going into primary care and rural practice were considered. For those graduates going into rural primary care, the number and percentage having made at least one move since first going into practice were also examined, as well as the average number of years RMED graduates have remained in their most recent community of medical practice.

Both data collection efforts were approved by the University's Institutional Review Board.

Results

Survey: Eight (40%) of the participating physicians were women. Twenty per cent had been in practice in their community for six months or less, while 40% were in practice from seven to 18 months and 40% for longer than 18 months. Based on the Illinois Department of Public Health designations of rural areas, 80% of the respondents were practising in a rural county with a population of less than 60 000, while the remaining 20% were practising in a rural county with a population of more than 60 000 people.

The major reason for deciding to practise in a rural location was family ties to the community (50%), followed by a loan or scholarship obligation (30%). With respect to attributes positively impacting practice satisfaction in the community, the most frequently mentioned was good partners/call coverage (30%), followed by good revenues/patient volume (15%) and autonomy/freedom in the rural practice setting (15%). Negative attributes of rural professional practice were varied: the top three mentioned by 10 to 15% of physicians were lack of private paying patients; hard work/long hours; and distance from specialists and medical testing.

Regarding personal satisfaction, the major positive factor mentioned was nice people or community (30%), with a variety of other factors also mentioned less frequently. The major negative factor related to personal and family satisfaction was lack of shopping or restaurants (15%). However, 80% of the participating physicians mentioned no negative factors relating to personal or family satisfaction.

The top two practice attributes potentially impacting negatively on retention in the community were hard work/long hours (25%) and patients not making adequate payment or being uninsured (20%). On the other hand, physicians most often reported three positive factors related to rural medical practice: being able to help and feelings of patients' appreciation of the physician (45%); enjoying the lifestyle and being able to balance work and family (20%); and meeting both individual and community needs (20%). Overall, 40% of the physicians indicated that they had no other needs and were happy with their quality of life. Finally, 60% of this group of physicians reported that they intended to stay in their present community indefinitely or until they retired. Another 25% said that they planned on staying in the community for another two to five years. Only 15% indicated that they planned on staying for less than two years or were uncertain of their future plans.

RMED programme outcomes: A total of 107 graduates of the rural programme have been in practice for at least three years. Of these, 79 (74%) have gone into primary care specialties – mostly (64 or 81%) family medicine but also general internal medicine, paediatrics, medicine-paediatrics (med-paeds) and obstetrics-gynaecology.

For analysis purposes, short-term versus longer-term rural retention outcomes of the RMED programme were considered. Short-term outcomes pertain to 30 graduates in practice for three to four years; longer-term outcomes apply to 77 programme graduates who have been in practice for five or more years. As presented in Table I, overall, 79 (74%) of the 107 graduates in practice have gone into primary care medicine, while 75 (70%) are in practice in rural areas. The percentage of graduates going into rural primary care slightly increases from 64 to 70% when comparing longer-term to short-term programme graduates.

Data were also analysed to represent the retention in the original communities of choice by graduates who went into rural primary care. This information is presented in the far right column of Table I.

Table I: Rural Medical Education (RMED) programme graduates' outcomes by short vs longer length of time in practice

	Primary care (PC)*		Specialty care		Rural PC physicians moved
	Rural	Non-rural	Rural	Non-rural	
Short term: 3–4 years	21 (70%)	3 (10%)	1 (3%)	5 (17%)	3 (14%)
Longer term: 5+ years	49 (64%)	6 (8%)	4 (5%)	18 (23%)	9 (18%)

*Primary care = family medicine; general internal medicine; paediatrics; medicine-paediatrics; obstetrics-gynaecology

Three of 21 graduates (14%) in the short-term group have moved at least once since going into rural practice. Similarly, nine graduates (18%) in the longer-term group have moved from one community to another since the start of their medical practice. In total, 12 of 70 rural primary care graduates (17%) have moved at least once. Related

to this, the average number of years that RMED graduates practising for three years or more have been in their most recent community was computed. The mean was 4.9 years, with a range from one to eight years. At the low end, six physicians had been in their current rural community for only one or two years. At the other end of the spectrum, 19 had been in the same rural community for seven or eight years.

Conclusions

This analysis focused on factors and outcomes related to the retention of rural physicians. According to the rural physicians interviewed, most decided to practise in rural areas because of family ties. Additionally, practice satisfaction centred on such factors as having good partners, reasonable call coverage, adequate patient volume, as well as the physicians feeling they were meeting a community need. As Muula describes in relation to workforce migration and the brain drain, policy-makers need to consider these types of factors as influences at two levels: 'pull' and 'push'. Pull factors may draw a person away from one community, or even country, toward opportunities elsewhere that are seen as more promising, related to such issues as remuneration and job satisfaction. Push factors come from within the community, such as lack of promotion opportunities and barriers to career advancement, serving as a catalyst for physicians – and other health care providers – to seek opportunities in other locations.[17] Interestingly, in the current study the majority of physicians indicated no push factors related to personal or family issues. This could be important as the focus for retention may need to target practice and professional variables, not 'attractiveness' of the rural community or environment.

This brings us back to the fact that most of the rural physicians in this study mentioned family ties as significant in their selection of practice location. While not all future rural health providers will necessarily want to return to their home communities for practice, this is a factor for many. For others, there may be a desire to return to a community similar to their rural home community. This is a premise upon which programmes such as the RMED programme have been built.[18] It is important to recruit and develop students with an 'affinity' for rural communities and service. There is a 'mission' in the RMED and similar programmes. Potential students have the opportunity to become doctors; they also have the opportunity to provide care for and serve their communities of origin or similar communities. It is a 'win-win' situation.

The results of this study's outcome data from the RMED programme are encouraging. A high percentage of graduates opt for primary care medicine and for rural practice locations. Seven out of ten graduates go into rural primary care. The RMED programme combines recruitment of students from rural areas with an 'add-on' curriculum for medical students that focuses on rural primary care and public and community health practices. Maintaining a perspective on rural primary health care and community health issues is important throughout medical school. Perhaps it is important to view rural retention as beginning with recruitment. It is much more likely that a student from a rural background and community will go back to practice, and stay, in a similar community than a student coming from an urban background and experience.[19–21] It is likely that the same principles hold across cultures, and the RMED programme is currently working with Princess Naradhiwas University (PNU) in Thailand to establish a similar version of the RMED programme in the Songkhla area.

Salafsky and colleagues state that policy-makers should initiate strategies to attract and retain health professionals. This particularly includes, but is not limited to, creation of opportunities for local training and career development.[13] This is a cornerstone of the RMED programme and emerging models such as the PNU initiative. Long-term recruitment and retention must entail a 'pipeline' approach in creating awareness and interest in careers in rural health professions. Curran and Rourke point out that institutions must develop outreach programmes to address increased awareness of medical careers as early as high school.[22] Knope et al agree, pointing out that data indicate that students involved in outreach programmes targeted to health professions awareness and education make earlier career choices as well as more informed choices.[23] This means working with local community government, schools and employers to offer programmes that provide information on health careers in rural areas and begin to identify local youth for induction into rural health care.

Over 80% of RMED programme graduates have stayed in their original practice community – many for as long as seven or eight years, the latter being graduates of the first two RMED classes. Additionally, 60% of the rural physicians who were interviewed reported that they intended to stay in their present community indefinitely or until they retired. These results are encouraging for the retention of rural primary care physicians. It is only through long-term service and commitment of rural primary care providers that health disparities in rural populations can be addressed effectively.

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Declarations

The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this paper.

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