Factors Influencing Rural Physician Retention Following Completion of a Rural Training Track Family Medicine Residency Program

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ABSTRACT

Introduction: Rural training track residency programs were created to aid in addressing the shortage of rural physicians. While these programs have been shown to increase rural recruitment and retention, the reasons for improved retention are unclear.

Methods: We analyzed survey results of 16 graduates of the UW-Baraboo Rural Training Track Family Medicine Residency Program on which factors influenced rural retention.

Results: Participants cited the wishes of significant others, meaningful work, and integration into the local community as the most important factors in rural retention. Loan repayment and teaching opportunities were least important.

Discussion: The factors identified in this study as important to rural retention were supported by previous literature and have remained consistent over time for rural physicians, including rural training track graduates.

Conclusion: Rural Training Track alumni physicians in our study found similar factors important to rural retention when compared to other rural physicians in the United States reported in the literature, regardless of residency background. These factors continue to be important to shape retention strategies employed by rural health care systems; future studies should evaluate rural retention strategies that utilize these factors.

INTRODUCTION

The maldistribution of physicians to rural areas continues to pose issues around hospital staffing and health care access across the Unites States, and many institutions are responding with various recruitment and retention strategies to create and sustain a sufficient rural health physician workforce.[1,2] While recruitment is critical to place physicians in rural areas, some researchers have argued that there needs to be more focus on factors that impact retention.[3] Since the 1990s, more studies have focused on retention as a way to bolster the rural workforce and have identified factors important to rural retention.[4]

Family medicine residency programs have been used to maintain and increase the number of practicing rural physicians because family physicians provide the highest proportion of care in rural areas.[1,2] One example is the 1-2 Rural Training Track Family Medicine Residency Program, where the first year of residency is completed in an urban setting and the following 2 years are completed at a rural site.[5] The primary goal of this model is to prepare more physicians who want to practice in rural areas for the personal and professional demands of rural practice.[5] These programs have placed over 70% of graduates in rural areas, and studies have shown that residency programs that prepare physicians to live in rural areas improve retention outcomes.[5,6]

While Rural Training Track (RTT) outcomes have been shown to improve rural physician recruitment and retention, little research has been done on what factors resulted in increased retention rates among graduates of these programs.[7] Additionally with changes in health care delivery and the structure of health care systems, we questioned if factors influencing rural retention have changed from previous generations. We hypothesized that the level of importance of various retention factors for RTT graduates would differ from previous generations of rural physicians because their training better prepared them for rural life and practice.

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METHODS

We conducted a case study of graduates of the University of Wisconsin-Baraboo Rural Training Track Family Medicine Residency Program (UW-Baraboo RTT) because this group demonstrates high recruitment rates to rural areas, but less is known about their retention. We created a cross-sectional survey to determine what these physicians found important to rural retention. Of the original 40 questions, the 16 that evaluated physicians' views on retention factors and demographic information were included in this analysis. Surveyed retention factors were based on previous literature, and the survey was reviewed by experts in the field but not validated.

Of the 29 graduates since the program's inception in 1996, three were excluded because they had not yet begun practicing independently at the time the survey was sent. The remaining 26 physicians were sent an invitation letter and a link to the survey on the Qualtrics platform via email in June 2017. Written consent was obtained at the beginning of each survey. Three email reminders were sent before the survey closed in July 2017. Those who had not responded by the end of June were mailed a paper copy of the survey, along with an introductory letter, a letter signed by the current program director encouraging participation in the study, and a prepaid return envelope. Current practices were defined as rural using Rural-Urban Commuting Area codes of 4 or higher. Rurality was also defined as communities with urban centers of fewer than 20,000 residents. Through cross-referencing our survey data with data collected by UW-Baraboo RTT, we determined which physicians had moved locations 1 or more times throughout their careers. This study was deemed exempt from formal review by the UW-Madison Health Sciences Institutional Review Board.

RESULTS

Of the 26 physicians invited to participate in our survey, we received responses from 19 (73.1%). Nearly three quarters (73.7%) of respondents were practicing in rural areas. Due to the small size of our study population and our focus on rural retention, the 3 respondents who had only practiced in urban areas were not included in analysis. Respondent characteristics are listed in Table 1. We also identified the mobility patterns of survey respondents (Table 2). Of the physicians who had ever practiced in rural areas, 87.5% were still practicing in rural areas. Half of the respondents were employed at their original practice sites. None of the physicians started practicing in an urban area and moved to a rural area. Most physician mobility occurred between rural practices, and the 4 respondents who planned on leaving their current practice in the next 3 years intended to continue practicing in rural areas.

Table 3 summarizes the importance of various factors in determining retention according to study participants. All queried factors except teaching and loan repayment opportunities were at least somewhat important in respondent's retention. The most important factors were significant other's wishes, meaningful work, and the local community. In addition to loan repayment and teaching opportunities, professional development opportunities also ranked least important.

Table 1. Respondent Characteristics

	N = 16 (%)
Currently practicing in a rural area	14 (87.5%)
Practicing in Wisconsin	10 (62.5%)
Practicing in a health professional shortage area	10 (62.5%)
Involved in teaching medical students or residents	14 (87.5%)
Completed a loan repayment program	2 (12.5%)
Practicing obstetrics	13 (81.3%)
Prenatal care only	1 (6.3%)
Prenatal care and delivery	6 (37.5%)
Prenatal care, delivery, and c section	6 (37.5%)
Grew up in a rural community (urban center < 20,000)	9 (56.3%)
Had at least 8 weeks of rural experience in medical school	8 (50.0%)
Probably or definitely wanted to become a rural physician prior to residency	12 (75.0%)
Female	9 (56.3%)
Married or has a partner	16 (100%)
Have children or plan to have children	14 (87.5%)

Table 2. Physician Retention and Mobility

	N = 16 (%)	Average # of Years	Range
Number of years in practice	--	8.3	1-18
Number of years at current practice	--	6	1-16
Practicing at original rural practice	8 (50%)	6.1	1-16
Moved between rural practices	4 (25%)	--	--
Moved from rural to urban practice	2 (12.5%)	--	--
Moved from rural to urban and back to rural practice	2 (12.5%)	--	--
Planning to leave current practice within 3 years	4 (25%)	--	--

Reasons for Leaving:

- Practice is considering a hospitalist model; we are also in dire need of another partner.
- Completing my MBA in Healthcare Management. I was offered a job in rural Wisconsin that includes leadership opportunities.
- Moving to Iowa.
- Transitioning from family medicine to mostly public health. I am our local health officer and only work 1-2 days per week in clinic.

DISCUSSION

Our results aligned with many previously reported outcomes and also provided some unexpected results. Respondents had remained in their current practices for an average of 6 years, nearly 1.5 years longer than reported in previous studies.[8] The proportion of physicians in our study who have continued practicing in rural areas is consistent with what has been found for other rural training track graduates (87.5% and 84.3%, respectively).[7] In general, a higher proportion of mobile primary care physicians move from rural to urban areas versus within rural areas; however, all mobile physicians in this study reported they were moving within rural areas, as well as the majority of physicians who previously had moved practices.[9]

Many of our retention results were consistent with those found

Table 3. Importance of Various Factors in Rural Retention

Rank	Factor	Mean (sd)
1	Significant other's wishes	4.50 (0.52)
2	Meaningful work	4.38 (0.81)
3	Local community	4.25 (0.58)
4	Medical community/work environment	4.20 (0.94)
5	Work/life balance	4.06 (0.85)
6	Broad scope of practice	4.06 (1.12)
7	Job security	3.81 (0.91)
8	Need for health care in the community	3.73 (0.80)
9	Proximity to family and friends	3.63 (1.09)
10	Income/benefits	3.50 (1.03)
11	Local school system	3.50 (1.15)
12	Professional development	3.38 (1.15)
13	Teaching opportunities	2.88 (1.09)
14	Loan repayment opportunities	2.00 (1.41)

Scale: Not at all important (1), A little important (2), Somewhat important (3), Very important (4), Extremely important (5).
Abbreviation: sd, standard deviation.

by Cutchin et al in 1994. Their study highlighted the importance of availability of relief coverage, compatibility with the medical community, acceptance in the local community, spouse's happiness, and access to family.[4] While similar factors observed in our study did not fall in the same order of importance, many of the same themes emerged in the importance of spousal support, local community factors, medical community support, and work-life balance. This study also supported our finding that professional development opportunities and opportunities to teach medical students or residents are less important factors for rural retention.[4]

While the Cutchin et al study supported many of our findings, it also produced results that varied from ours. Their study identified local public schools as one of the most important factors in rural retention, whereas our study found local schools to be only somewhat important.[4] Two of our respondents (12.5%) did not have children and if their responses are removed from the analysis, local school systems become the 7th most important retention factor. While this does not completely explain the variation, it is worth noting that local school systems may not be as important for rural retention to those who do not have school-aged children. They also found loan repayment assistance to be very important for rural retention; however, our results do not concur.[4] While this may have been true at the time their survey was conducted, other studies have shown that loan repayment may have an impact on recruitment but is not an important factor in rural retention.[2]

Other more recent studies also supported many of our results. The wishes of significant others has been found to be a main factor in rural retention, signifying the importance of spousal satisfaction and employability in the community.[10] Findings additionally conclude that physicians need to find their work meaningful and fulfilling in order to stay.[3,10] Many studies acknowledge the importance of the local community. Not only do communities need amenities that meet physicians' needs and wants, but community integration has been reported as a key factor in rural retention.[2,3,10] Finally, the physician needs to feel supported by the medical community and be able to achieve an acceptable work-life balance in order to stay at a practice.[3,10]

This study was limited by the small sample size of UW-Baraboo RTT graduates, therefore there were large standard deviations for some items. The variability in responses also is consistent with the belief that rural retention is a complex and individual concept with no universally accepted retention strategies.[3,4,10] Our study only focused on 1 RTT program, therefore results cannot be generalized to other rural residency programs. Additionally, the survey was not validated, preventing removal of weak survey questions that could have led to ambiguous outcomes.

CONCLUSION

UW-Baraboo RTT alumni physicians and other rural physicians in the United States found similar factors important to rural retention, regardless of residency background. These factors have remained consistent over time, indicating that the UW-Baraboo RTT training did not impact factors associated with retention, and these factors have remained consistent over time. However, these factors continue to be important to shape retention strategies employed by rural health care systems. Future work should evaluate rural retention strategies that utilize these factors, especially those that aim to foster spousal satisfaction, meaningful work, and integration into the local community.

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