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Medical practice in rural Saskatchewan: factors in physician recruitment and retention

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Introduction: The recruitment and retention of physicians in rural communities is a challenge throughout Canada and across the globe. In 1976, a group of medical students profiled rural communities with medical practices and produced a summary report entitled *Medical Practice in Saskatchewan*. Our objective was to repeat the 1976 study and to identify factors that motivate physicians to select rural locations for practice.
Methods: Physicians practising in rural Saskatchewan were interviewed in 2011 and 2012. Through qualitative, inductive analysis, we identified themes that drove the recruitment and retention of physicians.
Results: Sixty-two physicians were interviewed and 105 communities profiled. Of the physicians interviewed, 21 noted that the ability to practise full-scope family medicine and having the freedom to practise as they desire was important for recruitment, and 43 reported that these factors influenced their decision to remain in a community. Attraction to a rural lifestyle (cited by 17 physicians), having a rural background (13) and having ties to a specific community (12) were important for recruitment. Feeling appreciated by patients (45), one's spouse and/or family enjoying the community (41), and integration into the community (38) were important factors for retention.
Conclusion: The decision to practise in a rural location correlates with a desire for a broad and varied scope of practice, being attracted to a rural lifestyle and having rural roots. Once physicians establish a rural practice, they are more likely to stay if they can continue a broad scope of practice, if they feel appreciated by their patients, and if their spouses and family are happy in the community.

Introduction : Le recrutement et la fidélisation des médecins dans les communautés rurales présentent un défi partout au Canada et ailleurs dans le monde. En 1976, un groupe d'étudiants en médecine a dressé un profil des communautés rurales dotées de pratiques médicales et produit un rapport sommaire intitulé *Medical Practice in Saskatchewan*. Notre objectif est de répéter l'étude de 1976 et de relever les facteurs qui motivent les médecins à choisir de pratiquer en région rurale.
Méthodes : Nous avons interrogé des médecins exerçant en milieu rural en Saskatchewan en 2011 et en 2012. Par analyse inductive qualitative, nous avons recensé les facteurs qui ont favorisé leur recrutement et leur fidélisation.
Résultats : Soixante-deux médecins ont été interrogés et le profil de 105 communautés a été dressé. Parmi les médecins interrogés, 21 ont mentionné que la capacité d'exercer pleinement dans toute l'envergure de la médecine familiale et la liberté de pratiquer comme ils le souhaitaient avaient joué un rôle important dans leur recrutement et 43 ont mentionné que ces facteurs avaient influé sur leur décision de demeurer dans une communauté. Les facteurs suivants ont aussi été jugés importants pour le recrutement : l'attrait du mode de vie rural (mentionné par 17 médecins), provenir d'un milieu rural (13) et les liens avec une communauté en particulier (12). En ce qui concerne les facteurs de fidélisation, le sentiment d'être apprécié par les patients (45), le fait que les conjoints et(ou) les proches apprécient la vie dans la communauté (41) et l'intégration dans la communauté (38).
Conclusion : La décision d'exercer en milieu rural est en corrélation avec le désir d'avoir une pratique dont l'envergure est vaste et variée, l'attirance pour un mode de

vie rural et des racines rurales. Une fois que les médecins s'établissent en milieu rural, ils sont plus susceptibles d'y rester s'ils peuvent continuer d'avoir une pratique diversifiée, s'ils se sentent appréciés par leurs patients et si les conjoints et les familles se plaisent dans la communauté.

INTRODUCTION

Rural Saskatchewan has a long history of struggling to provide physician services, and it is a problem that is currently gaining a great deal of attention. According to the Canadian Institute for Health Information, Saskatchewan has the lowest number of physicians per 100 000 population of any province in Canada and the highest percentage of international medical graduates.[1] However, as Rourke[2] has pointed out, the pool of qualified international medical graduates is shrinking, and this has, and will continue to have, a profound impact on rural health services. Further, the Canadian Institute for Health Information found that in 2009, graduates from the University of Saskatchewan were the least likely to practise within their home jurisdiction compared with graduates of other Canadian medical schools.[1]

The shortage of physicians in rural areas is a global phenomenon in both developing and developed nations. If physician services are to be preserved in rural Saskatchewan, it is important to understand why physicians choose to practise in rural settings. In 1976, a group of medical students profiled rural communities with medical practices and produced a summary report entitled *Medical Practice in Saskatchewan*.[3] In 2011, The College of Medicine at the University of Saskatchewan and the Physician Recruitment Agency of Saskatchewan (SaskDocs) began working in partnership to repeat the study.[3] The overarching goal of this updated study was to elucidate factors that motivate physicians to select rural locations for practice and factors that result in long-term retention.

METHODS

In 1976, a project entitled Medical Practice in Saskatchewan[3] studied the state of practice in smaller centres throughout the province. Three medical students toured communities and reviewed community characteristics, health care delivery and the physician experience. The study provided a snapshot of the provision of medical services in Saskatchewan. An analysis of recruitment and retention factors was not done for the 1976 study.

In 2010, the dean and faculty members at the University of Saskatchewan's College of Medicine sought to repeat this snapshot of medical practice in Saskatchewan. In the same year, the Government of Saskatchewan announced the creation of SaskDocs with the mandate to support recruitment and retention of doctors in Saskatchewan. SaskDocs sponsored the project.

Standardized, direct interviews were conducted with physicians practising in rural Saskatchewan. Medical students at the University of Saskatchewan who were participants in the Physician Recruitment Agency of Saskatchewan Rural Externship Program, as well as 2 residents in the university's rural family medicine training program in Swift Current, Sask., conducted direct in-person interviews with rural physicians across Saskatchewan. Consent was obtained before conducting the interviews. The interviews lasted about an hour and were most often conducted at the physician's clinic. The interview was recorded and then transcribed by the interviewer. Interviewees were provided with a transcribed summary of the interview and signed a transcript release form acknowledging that the transcript was accurate. The family medicine residents conducted interviews in the remaining communities from the fall of 2011 until the spring of 2012. The students and residents were paid a stipend to complete the interviews and were reimbursed for mileage.

The method used was consistent with grounded theory, seeking to discover the key factors through interviews rather than exploring a predetermined hypothesis. An inductive analysis was used to determine the various themes that drive rural family physicians to practise in rural Saskatchewan. According to Patton,[4] "[i]nductive analysis involves discovering patterns, themes, and categories in one's data. Findings emerge out of the data, through the analyst's interactions with the data, in contrast to deductive analysis where the data are analyzed according to an existing framework." To generate the themes, identifying information about the communities was removed and the themes were coded from the various responses by consensus among the researchers to identify the final themes. The authors independently analyzed the transcripts and summaries of the physician interviews with particular

attention paid to responses to the open-ended questions: "What attracted you to rural medicine?", "What attracted you to this community in particular?" and "Once you came to this community, what factors influenced you to stay?" The authors then compared their findings to elicit and articulate a set of common themes.

This project received ethics approval from the University of Saskatchewan's research ethics board before data collection.

RESULTS

Of the 105 communities profiled, 99 communities were visited, and a physician interview was conducted in 66 communities. Five community interviews overlapped because the physician serviced multiple communities; therefore 62 interviews were included in the data analysis.

Themes that were identified from the interviews are shown in Box 1. Of these themes, the most prevalent for recruitment were the scope of practice (34%), desire for a rural lifestyle (27%) and having a rural background (21%). As one respondent noted, "the variety, autonomy and cradle-to-grave philosophy attracted me to rural family medicine." The full results of recruitment themes by frequency are listed in Table 1.

In terms of retention, the most prevalent themes were feeling appreciated by patients and getting to know them well (73%), scope of practice (69%), and spouse and/or family being happy in the community (66%). One interviewee remarked, "the enduring relationships with patients and the strong sense of community in a rural centre are what continue to attract me to rural practice." Another interviewee noted, "working in a rural setting enables one to better understand illness in light of the cultural and social context. There is greater continuity of care in a rural practice. For instance, even in the emergency room we know a great deal about our patients the moment they walk in the door; more than you could ever possibly know in the city." A positive work environment (32%) was also important. As an interviewee noted, "the camaraderie is much higher between physicians in a rural area. If help is needed, you can count on another physician offering a hand." Retention themes by frequency are listed in Table 2.

Box 1. Factors that influenced recruitment and retention of rural physicians

Community
- Education system
- Leisure activities
- Proximity to larger centre
- Feeling appreciated by the community
- Integration into and enjoying the community

Personal
- Rural background
- Grew up/previously lived in specific community (physician or spouse)
- Spouse has rural background
- Attracted to rural lifestyle, safety
- Friends or family living in the area
- Spouse and/or family enjoy the community, spouse found employment

Practice
- Work schedule (i.e., vacation time, locum relief, manageable call schedule, opportunity for continuing medical education)
- Regional support (i.e., easy access to larger centres, specialist support)
- Group practice
- Positive work environment
- Scope of practice, able to practise as they desire
- Independence
- Feeling appreciated by patients and getting to know them well

Compensation
- Financial incentives, signing bonuses
- Adequate amount and mode of remuneration

Table 1. Recruitment themes by frequency, *n* = 62

Theme	No. (%)
Scope of practice, able to practise as they desire	21 (34)
Attracted to rural lifestyle, safety	17 (27)
Rural background	13 (21)
From that specific community (physician or spouse)	12 (19)
Leisure activities	11 (18)
Friends or family living in the area	11 (18)
Proximity to larger centre	10 (16)
Integration into and enjoyment of the community	10 (16)
Group practice	10 (16)
Positive work environment	10 (16)
Feeling appreciated by patients and getting to know them well	10 (16)
Feeling appreciated by the community	8 (13)
Spouse has rural background	8 (13)
Spouse and/or family enjoy the community, spouse found employment	8 (13)
Work schedule (i.e., vacation time, locum relief, manageable call schedule, opportunity for continuing medical education)	7 (11)
Independence	7 (11)
Adequate amount and mode of remuneration	6 (10)
Financial incentives, signing bonuses	5 (8)
Education system	4 (6)
Regional support (i.e., easy access to larger centres, specialist support)	3 (5)

DISCUSSION

A large body of literature suggests a correlation between rural background and propensity to subsequently practise in a rural location. In this study, rural background was important but not the leading factor in physician recruitment and was less important for retention. Growing up in a rural location and being from the specific community being profiled were the third and fourth most frequently provided reasons for choosing to practise in the community. Having friends or family in the community was the fifth most cited factor and one's spouse being from a rural community ranked seventh. Our results show that having a link to rural Saskatchewan does matter in terms of one's decision to initially practise there. Programs that encourage rural high school students to pursue medicine as a realistic and achievable career option may improve recruitment and retention.

Much research has been done on the factors affecting recruitment of physicians to a rural setting. Henry and colleagues[5] concluded that "extensive literature" shows that "[a] period of rural residence of unspecified length prior to entry into medical school is the strongest predictor of a career in rural medicine after graduation."

The background of a physician's spouse is also important. Dunbabin and Levitt[6] report that the strongest association with rural practice was having a partner who grew up in a rural area, with rural family physicians 3 times more likely to have a spouse from a rural background than their urban counterparts. This association was stronger than that of the physician having completed primary or secondary school in a rural location.

Whereas a focus on training rural residents to become doctors will likely result in more rural physicians in Saskatchewan, it may also be worthwhile to preferentially admit and train those whose end objective is to practise full-scope family medicine. In describing rural medicine, a physician in the study remarked, "there is a full spectrum of patients from kids, young adults, families, adults, elders and geriatrics, allowing for lots of variety." Previous research has shown that most rural physicians did not grow up in a rural location.[7] However, the decision to practise in a rural area because one can practise full-scope family medicine was a common theme among interviewees, with 21 of 62 respondents citing it as an important recruitment factor. In terms of retention, 43 interviewees stated that their ability to practise full-scope family medicine was an important factor in deciding to remain in the community.

Rabinowitz and colleagues[8] found that after growing up rurally, the second most important independent factor predicting rural practice was entering medical school with plans to become a family physician. Indeed, it is in a rural setting that full-scope family medicine is most often practised.

Yang[9] surveyed urban and rural physicians in British Columbia and found that financial incentives played a limited role in recruitment. Jutzi and colleagues[10] surveyed medical students at Western University and found the most important influences on recruitment to be family, professional development opportunities and physicians' partners. However, more than half of respondents still cited "signing bonuses" and "tuition reimbursement" as important in their decision to practise rurally.[10]

An important retention factor is for the physician and his or her spouse and family to enjoy and feel integrated into the community. Included in this theme is the physician's spouse finding employment. This theme is one that can vary among rural communities in Saskatchewan depending on how much effort is made to welcome and integrate the physician and family into the community, as well as the existence of viable employment options. This is an area where policy-makers could focus their attention to ensure that programs to address spousal employment

Table 2. Retention themes by frequency, *n* = 62

Theme	No. (%)
Feeling appreciated by patients and getting to know them well	45 (73)
Scope of practice, able to practise as they desire	43 (69)
Spouse and/or family enjoy the community, spouse found employment	41 (66)
Integration into and enjoyment of the community	38 (61)
Attracted to rural lifestyle, safety	33 (53)
Positive work environment	20 (32)
Leisure activities	18 (29)
Work schedule (i.e., vacation time, locum relief, manageable call schedule, opportunity for continuing medical education)	18 (29)
Group practice	16 (26)
Independence	14 (23)
Proximity to larger centre	13 (21)
Friends or family living in the area	12 (19)
Feeling appreciated by the community	12 (19)
From that specific community (physician or spouse)	12 (19)
Education system	11 (18)
Rural background	10 (16)
Spouse has rural background	10 (16)
Adequate amount and mode of remuneration	5 (8)
Regional support (i.e., easy access to larger centres, specialist support)	4 (6)
Financial incentives, signing bonuses	3 (5)

and integration of a physician's family members are in place during or immediately after recruitment.

Though not as important as community factors, a collegial work environment with a manageable call schedule and opportunity for locum tenens coverage was important to respondents in our study. Interviewees valued group practices where vacation requests would likely be granted and the call schedule would allow for time with family and leisure activities. This could be achieved by setting reasonable work expectations when a physician is recruited and ensuring locum relief programs are responsive to the needs of physicians practising in rural areas.

Retention of physicians in a community is a complex interplay among community factors, personal factors and work environment. A review of the literature conducted by Rourke[2] identified several factors that affect retention of physicians in rural practice: educational factors (e.g., access to continuing professional development and education, admission of students from rural areas to medical school); practice factors (e.g., arrangements for vacation time and locum relief, regional support); financial factors (e.g., financial incentives, return-of-service contracts); regulatory factors (e.g., practice restrictions, hospital privileges); community factors (e.g., children's education, leisure activities, isolation); and personal factors (e.g., rural background, spousal and family interest).

To improve retention, it is important that the community provide some framework of integration for the physician and his or her family. This includes assistance finding housing and spousal employment[11,12] and facilitating social networking.[11] Physicians and families who feel a strong sense of connection to their patients and community stay in the community much longer than those who are not well integrated.[13–15] Community participation correlates with a longer stay, and physicians and their families must enjoy the rural lifestyle and leisure activities available.[14]

Attraction to a rural lifestyle, and feeling a sense of safety there, was an often-cited theme in our study. Internationally trained physicians are common in rural Saskatchewan, and they often come from countries where personal safety is a real concern.[1] Moving to a place that can guarantee a quiet, safe life for them and their families is quite attractive when seeking to leave their country of origin, and it was an appreciated aspect among interviewees. This aspect of rural life could be emphasized to potential physicians, particularly those being recruited internationally.

Interestingly, training in a rural setting was not a recurrent theme identified in this study. The literature suggests that rural training programs have been a boon for recruitment and retention of rural physicians.[5] Although much has been made of distributed medical education in Canada and elsewhere, this study's results do not indicate a large role. Rural medicine rotations during undergraduate medical training and in family medicine residency training have existed for decades. However, the push to train outside of an academic setting has certainly gained prominence over the past decade in Saskatchewan. Further, a study found that undergraduate rural experiences in Australia have the potential to be lost on the physician if these rural exposures are not continued throughout postgraduate training.[16] A rural family medicine residency program based out of Prince Albert, Sask., has existed for the past decade but has only gained popularity relatively recently. As of 2010, there has also been a rural family medicine training program in Swift Current, and programs have now begun in La Ronge, North Battleford and Moose Jaw in Saskatchewan. It is too early to know how these programs will contribute to the supply of rural physicians in the province over the long term. It would be interesting to revisit this study a decade or more from now to see what their impact has been.

Chan and colleagues[7] found that two-thirds of Canadian rural physicians were originally from an urban centre. These physicians rated exposure to rural medicine through electives and rotations as being very important to choosing rural practice. Henry and colleagues[5] found that "a number of reports support the efficacy of rural experience during medical training," with the effect strongest in the later years of medical training and for "prolonged rural placements that are thought to increase opportunities for rural connectedness."

Although scope of practice ranked very highly for both recruitment and retention in our study, the importance of the other themes diverged. Rural origin was relatively more important in terms of recruitment than retention, and practice factors became more important for retention, as did the physician and his or her family's enjoyment of and integration into the community. This makes sense in that one's primary motive for practising in a rural community is likely to remain the reason to stay, if that goal can be satisfied. It also makes sense that one likely realizes the practice factors and community factors after having lived there and experiencing life in the community. Whereas wanting to live

in a rural locale and having a rural origin can bring someone to a rural community, it is the people living there, and how welcome the physicians feel, that influences retention.

Limitations

The interviews were done by a number of students and residents at different levels of training. This presents some potential variation in results depending on the skill of the interviewer, thoroughness of recording of responses and success in establishing a rapport with the interviewee. There may have also been reporting biases among the physicians. This was not accounted for. For example, it is considered nobler to comment on enjoying the variety and scope of practice rather than financial factors. We did not explore whether this effect may have been amplified in the context of interviews performed by junior versus more senior interviewers.

There was scarce mention of financial incentives and generous remuneration agreements motivating the physicians interviewed, in terms of both recruitment and retention. This finding should be viewed with some caution, as it is possible that interviewees were reluctant to admit to medical students the degree to which financial incentives and levels of remuneration played a substantial role in their decision to initiate and maintain rural practice. Indeed, research has shown that signing bonuses and tuition reimbursements are important in a physician's decision to practise in a rural location.[10]

CONCLUSION

A better understanding of the factors that influence physicians to establish and maintain rural practice must be better understood so that physician services in rural Saskatchewan can be sustained. Direct interviews with 62 physicians practising in rural Saskatchewan revealed that those most likely to practise in a rural location favour a broad and varied scope of practice, are attracted to a rural lifestyle and have rural roots. Once someone establishes a practice in a rural area, they are more likely to stay if they can continue a broad scope of practice, if they feel appreciated by their patients, and if their spouses and family are happy in the community. Future strategies for recruitment and support of physicians for rural Saskatchewan should take these factors into account.

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