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"Industrious, submissive, and free of diseases": 156 years of physicians in Liidlii Kue/Fort Simpson, Northwest Territories

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Introduction: Physician recruitment to rural and remote communities poses a major challenge to health care delivery in Canada. Rather than focusing solely on the politics and policies that contribute to the shortage of family physicians in Canada's North, we argue that more attention should be paid to the reasons that lead, and have led, family physicians to the North, and also to the factors that contribute to physician retention.
Methods: We used archival research and semi- and unstructured interviews to provide a history of medicine in Liidlii Kue/Fort Simpson, NWT, and to describe the features of physicians who have served and continue to serve this Northern community.
Results: Results show that medicine in Liidlii Kue/Fort Simpson can be divided into 4 distinct eras: the prehospital era (1848–1916), the early hospital era (1917–1925), the middle era (1926–1972) and the government era (1973–present). Thirty-eight physicians were identified as having worked in Liidlii Kue/Fort Simpson. Of those, 19 were contacted. Nine physicians and the offspring of 1 deceased physician were interviewed. We found physicians fell into 1 of 4 categories: new graduates, those seeking midcareer (or midlife) change, those about to retire and international medical graduates.
Conclusion: By examining Liidlii Kue/Fort Simpson as a case study, this research fills the dearth of knowledge in the factors that contribute to physician recruitment and retention in Canada's North.

Introduction : Le recrutement des médecins dans les communautés rurales et éloignées pose un défi majeur à la prestation des soins de santé au Canada. Au lieu de nous concentrer uniquement sur la politique et les politiques qui contribuent à la pénurie de médecins de famille dans le Nord, nous sommes d'avis qu'il faut accorder plus d'attention aux raisons qui y attirent et y ont attiré des médecins de famille, ainsi qu'aux facteurs qui contribuent à les y garder.
Méthodes : Cette communication est fondée sur une recherche effectuée dans des archives et sur des entrevues semi-structurées et non structurées afin de présenter un historique de la médecine à Liidlii Kue-Fort Simpson (T.N.-O.) et de décrire les caractéristiques de médecins qui ont servi et servent toujours dans le cette communauté du Nord.
Résultats : Les résultats montrent qu'il est possible de décrire la médecine à Liidlii Kue-Fort Simpson à quatre époques distinctes : l'époque préhospitalière (1848–1916), les débuts de l'époque hospitalière (1917–1925), la période intermédiaire (1926–1972) et l'époque gouvernementale (1973 à aujourd'hui). On a déterminé que 38 médecins avaient travaillé à Liidlii Kue-Fort Simpson et on a communiqué avec 19 d'entre eux. Nous avons interviewé neuf médecins et un descendant d'un médecin décédé. Nous avons constaté qu'il y avait quatre catégories de médecins : les nouveaux diplômés, ceux qui cherchent un changement en milieu de carrière (ou en milieu de vie), ceux qui sont sur le point de prendre leur retraite et les diplômés de facultés de médecine étrangères.
Conclusion : En analysant Liidlii Kue-Fort Simpson comme étude de cas, cette recherche comble les lacunes du savoir sur les facteurs qui aident à recruter des médecins dans le Nord du Canada et à les garder en poste.

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Introduction

In recent years, the federal, provincial and territorial governments in Canada, along with the media, have focused a great deal of attention on physician shortages in rural and remote communities, particularly in northern regions.[1,2] According to the Society of Rural Physicians of Canada, 22.2% of Canada's population lives in towns of less than 10 000 residents, but only 10.1% of physicians practise in such environments.[3] Clearly, there is a shortage of rural physicians. Despite the current heightened interest in this issue, physician shortages have plagued Canada's North for well over 100 years. Rather than focusing solely on the politics and policies that contribute to the shortage of family physicians in Canada's North, we believe that more attention should be paid to the reasons that lead and have led family physicians to practise in the North, and also to the factors that contribute to physician retention.

The Canadian context

The European project of colonization extended far beyond inhabiting Northern communities and exploiting their resources. Early Europeans, in what is now called Northern Canada, brought with them ideologies pertaining to "civilization"; certainly, European notions of health played a prominent role in the physical and ideological colonization of the North. While Aboriginal residents practised their own forms of medicine, European explorers and fur traders often brought with them their own doctors and their own understandings of medicine when travelling to and in the North.[4] The practice of bringing doctors to the North from the South continues to this day. Despite 17 Canadian medical schools, the current demand for doctors in Canada's North is so high that many Northern Canadians rely on international medical graduates (IMGs) for the provision of their health care.[5] This foreign solution to a Canadian problem is over 100 years old; indeed, even the Hudson's Bay Company (HBC) sought foreign-trained physicians to treat its Northern-based employees at trading posts and forts.[4] Despite the influx of foreign-trained physicians, physician retention in the Northwest Territories (NWT) has been, and remains, very low.[6] The ongoing difficulties associated with attracting and retaining family physicians — Canadian or otherwise — makes it imperative that health care administrators develop an understanding of the personal and demographic characteristics that can be used as predictors for the type of physician who might have an increased likelihood of choosing a long and satisfying career in Canada's North.

James Rourke[7] succinctly summarized the findings of the Canadian Medical Association's report of the advisory panel on the provision of medical services in underserviced regions. He listed professional factors contributing to the decision to leave rural practice as including "work hours, professional backup, specialty services, additional training, hospital services, continuing medical education and earning potential." Among family and personal reasons for leaving were "children's education, spousal job opportunities, recreation, cultural opportunities and retirement." Mayo and Mathews[8] expanded the literature on the spousal influence in the decision for a physician to live in an underserviced area by identifying 2 factors that directly affected spousal happiness in rural Newfoundland communities: 1) physician workload and 2) community integration (which relies on employment opportunities, having a rural background or experience in rural communities, proximity to family and friends, maturity, cultural differences and children).

In terms of finding solutions to these problems, Duplantie and colleagues[9] suggest that telehealth consultations with specialists might make working in rural and remote environments easier on physicians by providing them with timely access to backup and second opinions.

Most of the literature on the recruitment and retention of physicians in rural and remote Canadian locations has involved asking physicians from across the country to reply to surveys rather than looking to see whether there are characteristics unique to specific regions, towns or physicians. This paper seeks to explore the personal characteristics of physicians who worked in Liidlii Kue/Fort Simpson† over the last 156 years and to determine whether previously identified factors hold true for this group of individuals.

Methods

Situating the community and its residents

Liidlii Kue/Fort Simpson is a community located at

†Liidlii Kue is the South Slavey name for the community that was later given the name Fort Simpson. By providing both names for the community, we acknowledge the multiple identities and attachments of the residents of the land upon which this research was conducted.

the confluence of the Mackenzie and Liard Rivers (Fig. 1). Historically, the community has served as a gathering and trading place for Aboriginal peoples in the Dehcho (District of Mackenzie) region of the NWT. Aboriginal residents of this region are Dene, specifically Slavey and Métis. According to Abel,[11] the Slavey are "found along the Mackenzie [River] between Great Slave Lake and Fort Norman [now Tulita], along the Liard River to Fort Nelson, and through northern British Columbia and Alberta to Hay River." Though long important for Aboriginal peoples, Liidlii Kue/Fort Simpson gained prominence for Europeans when it became a location for a fur-trading post for the North West Company, and later the HBC. The North West Company built "Fort of the Forks" in 1803, though the Fort's name was changed to Fort Simpson when the HBC absorbed the North West Company in 1821.[11] Today, Liidlii Kue/Fort Simpson is a village of about 1200 Aboriginal and non-Aboriginal residents that is accessible by both road and air. It has offices for branches of local and regional Aboriginal governments, the territorial government and a municipal government, and it is home to the regional high school and, notably, to a health centre.

Prior to commencing this research project, the requirements for ethical approval as set out by Dalhousie University's research ethics board were satisfied. In addition, a research licence was obtained from the Aurora Research Institute, the institution that issues research licences on behalf of the government of the NWT. To obtain a research licence in the NWT, community consultation must be conducted with the Aboriginal and non-Aboriginal governments located within the research area. As a result, we conducted community consultations with the Village of Fort Simpson, Liidlii Kue First Nation, Dehcho First Nations, and Metis Nation Local #52. All organizations granted permission for the research to take place.



Fig. 1. Canada's Northwest Territories.[10]

Archival research

Through interviews and the examination of patient files, church records and a photographic archive, we identified those physicians who had practised in Liidlii Kue/Fort Simpson for a duration of at least 4 months during the period from 1848 to 2002.

Initially, it was hoped that most physicians would be identified through the examination of old patient files. About 100 files belonging to deceased or inactive patients were located in a storage closet at the current health centre. Unfortunately, the physicians' handwriting and signatures in the old files were difficult to decipher and thus did not aid in the identification of physicians. Nevertheless, the prevalence of tuberculosis in Canada's North during the middle of the last century generated a tremendous number of pathology specimens: fortunately, the pathology reports from sputum samples were typed and included the legible names of the physicians requesting the tests. These pathology reports generated the names of most of the physicians identified by this research.

While the lack of a complete set of formal hospital records presented a challenge, the Catholic and Anglican Churches' records were useful for the purposes of identifying physicians who had practised in the community. The Village of Fort Simpson's visitor information centre houses several historical documents, including 2 centenary papers: 1 produced by the Sacred Heart Mission[12] and 1 produced by St. David's Anglican Church parish.[13] The Sacred Heart document identified several doctors who worked at the hospital in the first half of the 20th century and provided their arrival and departure dates. A search of the NWT online photographic archives yielded labelled photographs of 2 doctors who practised in Liidlii Kue/Fort Simpson. Short-term locum physicians who filled in for physicians while they were out of town were not included in this research. This decision was made to restrict our focus to physicians who made a more significant time commitment to the region. We arbitrarily chose 4 months of work in Fort Simpson/Liidlii Kue as the cut-off for inclusion in this project.

Interviewing community members

Snowball sampling, a form of purposeful sampling, was used to locate interview participants. Cresswell[14] notes that snowball sampling "identifies cases of interest from people who know people who know what cases are information-rich." Through this process, 6 Liidlii Kue/Fort Simpson residents were asked whether they would be willing to be interview participants, and all agreed to participate. Each of the participants in this study was provided with a participant information letter and consent form to ensure free and informed consent.

It should be noted that it was at times culturally unacceptable to seek written consent. In such cases, a verbal explanation of the contents of the participant information letter was provided either in English or, with the help of an interpreter, in South Slavey, the local Dene dialect, and the potential participant's response of giving consent was recorded in detail in field notes. If a participant wished to withdraw from the study, he or she was able to do so at any time without consequence, and information based on interviews or observations would have been removed and destroyed by the researcher on request. Happily, this situation did not arise.

Both semistructured and unstructured/informal interviews were conducted with local residents to gather data about physicians who had worked or were working in Liidlii Kue/Fort Simpson. Interviews ranged in length from 5 to 60 minutes. Questions included but were not limited to the following:

1. Do you know the names of any of the doctors who have worked in Liidlii Kue/Fort Simpson?
2. Do you know the approximate date when each of the above-listed physicians started work in Liidlii Kue/Fort Simpson?
3. Do you recall the approximate date that they left Liidlii Kue/Fort Simpson?
4. Do you know why the doctor left town?

Six townspeople were interviewed.

Community members were able to physically describe many of the former physicians who had worked in Liidlii Kue/Fort Simpson; however, they were only able to provide the names of 4 former physicians, an ambulance driver and a physician's assistant who had worked in Liidlii Kue/Fort Simpson over the years. A local resident who had run the ambulance service for many years was particularly helpful in providing accurate names and key information concerning physicians. These names were then added to a list that had been generated through the aforementioned archival research.

Once the names of physicians had been identified, an internet search of their names was conducted with the Google search engine (google.com). The results helped to create leads as to where surviving physicians might be practising or to their medical school of origin. The website for each province's College of Physicians and Surgeons was searched. This provided contact information for physicians who were still in

practice as well as several retired physicians. Some of the physicians identified through the research were difficult or impossible to track down because of the common nature of their surnames, for example, Dr. Clark. It often took several attempts to connect with the physician who was the target of the research. Physicians with the same name as the target who were accidentally contacted were extremely helpful in redirecting the investigator.

Interviewing the physicians

Questions posed to the physicians were piloted on 2 physicians and the interview questions were then refined. Two types of questions were asked: closed-ended questions concerning basic demographic data (e.g., sex, medical school, year of graduation, marital status) and open-ended questions pertaining to why physicians had chosen to practise in Liidlii Kue/Fort Simpson as well as the factors that ultimately led to their departure (Why did you choose to leave Liidlii Kue/Fort Simpson? What might have been done that would have convinced you to continue to practise in Liidlii Kue/Fort Simpson?). Physicians were interviewed in person and via email, fax and telephone. Though there was a limited response to requests for interviews, it should be noted that those physicians who did participate in the project were extremely enthusiastic and often went above and beyond the scope of the interview by contributing photos, videotape footage and personal documents.

Results

Historical data: the 4 eras

Through the examination of archives and interviews with physicians and townspeople, 4 distinct eras of family medicine were identified in Liidlii Kue/Fort Simpson: the prehospital era (1848–1916), the early hospital era (1917–1925), the middle era (1926–1972) and the government era (1973–present).

Prehospital era (1848–1916)

From its inception, the HBC realized that it needed skilled physicians to provide health care to its workers in remote, Northern communities.[15] The HBC understood that it needed to acquire the services of physicians whom it believed were suited for work in the relative isolation and harsh climate found in Canada's North. As a result, the HBC targeted residents of the Orkney Islands as potential physician recruits because it believed the Orcadians to be "industrious, submissive, and free of diseases."[15] HBC physicians hailing from abroad, along with missionaries, provided basic medical services before the establishment of a hospital in Liidlii Kue/Fort Simpson.

During the early prehospital period in Liidlii Kue/Fort Simpson, physicians were often at the Fort only during the winter months as they waited for the ice to break up so that they could continue their scientific adventures. These physician–adventurers included such notable men as surgeon and biologist Sir John Richardson, who was in the region studying ichthyology and searching for the lost Franklin expedition in 1848,[16] and Dr. John Rae. Dr. Rae was a surgeon from the Orkney Islands who acted as Chief Factor for the HBC in Liidlii Kue/Fort Simpson in 1849 but left the post to join the search for Franklin and his men.[16] Known as Canada's "Great Pedestrian," Rae covered over 21 000 km on foot and mapped 2800 km of Canada's northern coastline.[16] Though both Richardson and Rae were in Liidlii Kue/Fort Simpson chiefly as explorers, it is reasonable to hypothesize that they used their medical skills to help those in need.

The prehospital years in Liidlii Kue/Fort Simpson also saw medical care being provided by missionaries with a variety of skills. Ministers and their spouses, who were in residence at St. David's Anglican Church in Liidlii Kue/Fort Simpson, were occasionally pressed to provide medical care. In the Anglican Church's centenary document[13] it is noted that the minister's wife, Rose Spendlove, who had limited medical knowledge and expertise, provided medical services that saved the lives of more than 1 parishioner. During her tenure in Liidlii Kue/Fort Simpson, Rose Spendlove is said to have performed 2 successful surgical amputations and to have nursed many back to health during the epidemics of influenza and measles in 1881.

Early hospital era (1917–1925)

Missionaries were also involved in the care of local residents in the early hospital years. Hospital service in Liidlii Kue/Fort Simpson began on Sept. 7, 1916, when the Grey Nuns, working with the Sacred Heart parish of the local Catholic Church, opened St. Marguerite's Hospital.[12] The Grey Nuns, part of the order of the Sisters of Charity of Montreal, provided medical care in Liidlii Kue/Fort Simpson from 1916 to 1990. They were both lay and professional nurses who travelled great distances to provide health care to poor and underserviced patients.

The Nuns' contribution to the health of Northerners cannot be overstated and is well-documented elsewhere, for example in Sutherland's (1996) text *Northerners Say: "Thanks, Sisters."* For the first 10 years of the hospital's existence, the Sisters acted as medical officers and performed minor operations[12] without the help of a permanently appointed physician: itinerant physicians were rarely available.

The middle era (1926–1972)

The first permanent doctor, Dr. A.W.M. Truesdell, arrived in Liidlii Kue/Fort Simpson in August 1926. He began his work at St. Marguerite's Hospital and stayed for a record 23 years (Don Truesdell, son of A.W.M. Truesdell: personal communication, 2003). Unfortunately, St. Marguerite's Hospital burned to the ground in 1930;[12] it was quickly replaced by St. Margaret's Hospital in 1931. St. Margaret's served mainly as a tuberculosis hospital, with some patients staying for up to 8 years (Ed Lindberg: personal communication, 2003). Though the hospital became the primary residence for many patients with tuberculosis, the Sacred Heart Mission's archives reveal that many residents of Liidlli Kue/Fort Simpson were eager to avoiding spend time there:

> Unfortunately, a relatively large number of patients have died at the Hospital during the first quarter century of its operation ... an opinion began to spread in the early 30s that admission at the St. Margaret's Hospital meant for the patients admission to the cemetery.[12]

The facilities at the early hospitals in Liidlii Kue/Fort Simpson were modest and likely did not instill confidence in local residents or physicians. For instance, surgery at St. Margaret's Hospital was often postponed until the late afternoon when the operating room was best illuminated by sunlight (Micheal Thain, former Liidlii Kue/Fort Simpson physician: personal communication, 2004). Indeed, the shortage of basic equipment, such as adequate lighting, likely disappointed southern-trained physicians who were accustomed to having such things as electricity at their disposal.

Government era (1973–present)

In 1973, the federal government took over management of St. Margaret's Hospital from the Grey Nuns, closed it, and subsequently opened Fort Simpson Hospital.[17] The federal government found that it was impossible to run Fort Simpson Hospital with paid employees on the same budget that the nuns had used at St. Margaret's: this eventually culminated in the downgrading of the Fort Simpson Hospital to a health centre on Sept. 1, 1997. The health centre, unlike the hospital, did not provide acute care beds.[18] From this point on, acutely ill patients in need of hospitalization have been medically evacuated to Stanton Territorial Hospital in Yellowknife, NWT, or to 1 of several hospitals in Edmonton, Alta. While the current Liidlii Kue/Fort Simpson Health Centre does not have acute care beds, it does feature a 14-bed long-term care facility for elders and individuals living with severe physical or mental disabilities, or both.

Physicians

Our research with living doctors resulted in a total of 19 doctors and the offspring of 1 deceased physician, all of whom were contacted. Of the 19 physicians who were contacted, 9 physicians and 1 descendant participated in the project. With the 10 physicians who had practised in Liidlii Kue/Fort Simpson for 4 months or more and responded to requests for interviews (or a descendent responded on their behalf), the years 1925–2003 were represented by at least 1 physician per decade, with the exception of the 1950s (Table 1). On average, physicians stayed in Liidlii Kue/Fort Simpson for 49 months (range 4–276 mo). That number, however, is skewed by 1 physician who stayed for 276 months (23 yr). The median length of physician stay was 18 months. Upon examination of the physicians' employment experiences before working in Liidlii Kue/Fort Simpson, we found that the physicians had a mean of 7.1 years post–medical school graduation before they accepted their posting in the community. Eight of the physicians had experience working with First Nations, Métis or Inuit populations, and 7 of them had previously practised in the North. Five of the physicians interviewed had recently graduated

Table 1. Physician sex and time period spent in Fort Simpson/Liidlii Kue

Physician sex	Time period
Male	1926 to 1949
Male	Aug. to Nov. 1942
Male	Fall 1964 to spring 1966
Female	Feb. 1966 to Sept. 1967
Male	July 1967 to July 1968
Male	Sept. 1968 to July 1969
Male	July 1971 to Apr. 1974
Male	June to Oct. 1985
Male	1991 to 1995
Male	July 1998 to July 2002

from medical school when they ventured north. Five doctors were recent graduates when they practised in Liidlii Kue/Fort Simpson and 4 were in midcareer. Data analysis revealed 4 subcategories of physicians who ventured to Liidlii Kue/Fort Simpson: new graduates, those seeking midcareer (or midlife) change, those about to retire and IMGs. A long-time physician in Liidlii Kue/Fort Simpson shared his understanding of the first 3 groups:

> 1) You get the young guys, the young new grads that are looking for adventure, who are willing to try anything. And some of them are very good. Some of them, though, I can say that I don't think that this would be the place for a new grad. Experience really helps — working in a small group; 2) The midlife crisis guys, as I call them, of which I'm one. You sort of get tired of what you're doing and want a change and have the experience and stability to look around. I personally think they're a good group to grab — and they're not common. And, unfortunately, when those docs say that they want to change jobs, there's so much out there available that they're usually snagged by someone else long before they phone up here; 3) The almost gonna retire guys who want to do something different for the last few years of their practice [and] pay for the kids' university.

The categorizations provided by this physician aligned extremely well with this study's findings. Five of the physicians interviewed had recently graduated from medical school and had not had much experience. One physician remarked:

> I was very naive. I knew I'd have to do obstetrics. By the time I got to obstetrics in my training, I knew I was going to Fort Simpson and they gave me extra training. Now knowing how much trouble you can get into I think I'd be less likely to go now.

Four physicians either identified themselves as experiencing a "midlife crisis" or were middle-aged and reported that they were seeking adventure, a change of routine or both. One physician practised in Liidlii Kue/Fort Simpson at the end of his career. Members of 1 final category, IMGs, were not interviewed as none could be located despite considerable effort.

One physician provided us with a perhaps unorthodox framework for categorizing physicians who have travelled north:

> These categories have long been used to describe any person working in the North, and while they may have negative connotations for some they have become part of the rural vocabulary. You know about the 3 Ms — the 3 types of people who live in the North: mercenaries, missionaries and misfits. I was a bit of all 3. A mercenary because I was there to earn money, a missionary because I was there to work at my goal (seeing if I could hack it as a doctor) and a misfit because I didn't fit into traditional modes and didn't join a GP practice in TO [Toronto] right after internship.

Reasons for coming

Physicians who practised in Liidlii Kue/Fort Simpson stated various reasons for deciding to work in the community. Three physicians said that they were approached directly by Northern Health Services, a federal government body that recruited physicians for Canada's North. Two physicians contacted Northern Health Services themselves, while 2 other physicians answered an advertisement recruiting physicians to the North. A desire for adventure was the reason 2 other physicians gave for coming north, and the final 2 physicians identified the challenge of remote medicine as their reason for moving to Liidlii Kue/Fort Simpson. One respondent described his reasons for working in the community as follows:

> By pure luck and circumstance, I ran into L.L. who said she was looking at working in the North and that the pay was really good. If there had been the equivalent job in Vancouver, say something 9–5, then I would have done that but ... the monetary incentive was good enough to come up here that I would not have to work full-time which would then give me lots of time off. So that was the big reason for coming up here. I didn't have a burning desire to come to the Northwest Territories. In fact, I had not even thought of it until talking to L.L.

Economic factors influenced physicians' tenure in Liidlii Kue/Fort Simpson. For instance, 8 of the physicians felt they were adequately financially compensated for their work, especially when they considered that their housing was provided. All but 1 of the physicians had their travel to and from Liidlii Kue/Fort Simpson funded. Seven of the physicians felt that the vehicle with which they were provided while in the community was safe and adequate. All the physicians agreed that their lodgings were reasonable. Physicians were not motivated solely by remuneration: 4 physicians indicated that the desire to work with an underserviced population factored into their decision to practise in the community. Currently, Liidlli Kue/Fort Simpson locum physicians are offered a competitive salary, housing and the use of a minivan (Shane Barclay, medical director, Dehcho Health and Social Services: personal communication, 2003).

Reasons for leaving

For various reasons, none of the living physicians interviewed were interested in making a long-term commitment to practise and live in the community. The 2006 NWT Physician Survey revealed that 17 of the 38 physicians practising in the NWT stated that it was "unlikely" or "very unlikely" that they

would be practising in the NWT in 5 years.[6] While remuneration certainly played a role in attracting physicians to the community, it was apparently not enough to retain their services. Physicians cited several different reasons for leaving their practice in Liidlii Kue/Fort Simpson. Four reported that they never intended to stay longer than their initial contract. Two cited the 24 hours per day, 7 days per week call schedule as factoring into their decision to leave. One left after being offered a promotion, and 1 other physician left his practice because his spouse could not cope with the isolation of living in Liidlii Kue/Fort Simpson. Four physicians cited the lack of access to continuing medical education (CME) as a reason for leaving. A sense of professional isolation, moving to another area of Canada with a perceived greater need for a physician and the desire to live with one's family on a full-time basis (it is not uncommon for physicians who work in remote regions of Canada to work in a community far from home and periodically return to their home community and family) were other reasons cited for leaving Liidlii Kue/Fort Simpson.

Another factor that is both controversial and difficult to measure directly, the perceived poor quality of the educational system in town, caused at least some of physicians to leave before their children reached school age. Four of the physicians interviewed stated that they did not want their children to attend the schools in Liidlii Kue/Fort Simpson and that this was one of the most important factors influencing their decision to leave. One physician noted that "we left partly because we couldn't see having children reach school age in Simpson." Only 1 physician said that he believed that his children received an adequate education in the community.

Finally, physicians noted that a lack of locums to fill in for them while they were away prevented them from attending CME events and caused them to feel that they were falling behind in their practice of medicine. Four physicians explicitly stated that the lack of access to CME was one of the reasons why they left Liidlii Kue/Fort Simpson. One physician stated, "it became hard to sustain the belief that someone else with more training could not have done better." One doctor succinctly stated the problems of working in Liidlii Kue/Fort Simpson in response to the question: Why did you leave Fort Simpson?

> 1) Professional isolation and 2) the government had promised me a certain amount of educational leave but there always seemed to be a reason why I couldn't get out. During that time we founded the NWT Physician's Association. I had good holidays and I used to take them in one big lump in the summer and they always had difficulty replacing me. Some of the locums trashed the house we were living in. There was some frustration with what the government had promised and didn't happen.

While there were clearly benefits and enjoyable features for family physicians practising in Liidlii Kue/Fort Simpson, for this small sample size they did not seem to be enough to outweigh some of the negative aspects that the physicians described.

Discussion

Employing physicians from each career stage identified previously can be associated with various benefits and drawbacks. As noted, 5 of the physicians interviewed had recently graduated from medical school. While new graduates certainly have up-to-date skills, it is possible that they lack experience and may not have the skills needed to work as a solo physician. Four of the physicians interviewed were placed in the midcareer category. Physicians in this category usually possess good practical experience and solid technical skills; however, their mobility is often hampered by school-aged children and spouses who are looking for employment. Only 1 of the physicians interviewed was at the end of his career in medicine.

The final category identified was IMGs. As mentioned above, though many IMGs have worked in Liidlii Kue/Fort Simpson, unfortunately none could be located for interview. These physicians help to fill the need for physicians in the North and, indeed, throughout Canada: it has been calculated that 23% of practising physicians in Canada are foreign-trained.[19] The foreign-trained doctors who came to Liidlii Kue/Fort Simpson did not necessarily have to have a Canadian medical license. Many foreign graduates who worked in the North served the minimum amount of time that was once required to allow them to move on to the next phase of licensing. Like physicians in any rural community, some foreign graduates will go to a Northern community with the intention of staying for the minimum period of time and end up spending their entire career there. In fact, Thind and colleagues[20] revealed that IMGs were "more likely than Canadian-trained medical graduates were to be serving in small towns and rural and isolated communities." While it is difficult to determine whether this geographic phenomenon is by choice or as a result of licensing restrictions, foreign-trained physicians are vital to the Canadian health care system as they fill positions in communities that would otherwise be without a physician.

The 3 Ms categories — missionaries, mercenaries

and misfits — merit some discussion. As mentioned in the results section, missionaries made considerable contributions to medicine in Canada's North. The contributions of the other 2 categories, mercenaries and misfits, require further elucidation.

The *Oxford English Dictionary*[21] defines "mercenary" as an adjective meaning "primarily concerned with money or other reward" and as a noun meaning "hired soldier in foreign service." Both terms are apt for partially describing the motivation of the wave of physicians that followed the adventurers and missionaries to Liidlii Kue/Fort Simpson in the middle and government eras. While all doctors work for payment, money is not necessarily the driving force behind their decision to work in a particular community. Some physicians chose to work in Liidlii Kue/Fort Simpson when the rate of pay was less than they could have earned in the South because they were looking for adventure and the challenge of rural and remote medicine.

Years later, physicians were lured to Liidlii Kue/Fort Simpson by a salary that was higher than they could earn in the South. These men and women were doctors for hire — they had no particular loyalty to the community or the North. They were seeking financial gain and exciting medicine, and they were willing to travel to achieve their goals. Though perhaps the word "misfits" is harsh, it describes an eclectic group of people who were scattered throughout the entire 156-year period this study examined. There is an abundance of anecdotes about a physician who was said to have removed an appendix from the same person more than once, another who wore safari gear and a third who was so scared of the locals that she would not walk in the community. These sorts of tales, however, are more legend than good research and, certainly, every community has a few eccentric characters.

Future physician recruitment

Strikingly similar to the findings of the Canadian Medical Association's report of the advisory panel on the provision of medical services in underserviced regions (as previously quoted from Rourke[7]), there are several changes that the physicians interviewed suggested could be made to entice more doctors to practise in Liidlii Kue/Fort Simpson. These include guaranteeing locum coverage for vacations and CME, and funding accommodation for those who sign permanent contracts. One important change has already taken place: Liidlii Kue/Fort Simpson was designated as a 2-physician community in April 2005 (Hazel Isiah, Dehcho Health and Social Services: personal communication, 2006). Designating the community as one requiring 2 doctors means that physicians are able to take call every other night as opposed to every night. Further, the community can be covered by a physician when the second physician is away holding clinics in the neighbouring communities. Issues that remain include providing guaranteed locum coverage for CME and vacations so that physicians can continue to maintain and upgrade their medical skills and take much needed rest without having to worry about finding a replacement. Finally, the current locum contract provides physicians with accommodation and a vehicle, while the permanent contract does not offer such perks — thus there is little incentive to sign a permanent contract. Though the above-mentioned changes would likely be costly, the medical care and resident satisfaction with that care in the Dehcho would likely improve with the ensuing continuity, and as a result, other costs, such as those associated with recruitment and arranging constant locums, might decrease.

Physicians with certain personality traits were found to be more likely to travel north. Physicians interviewed for this study stated that they possessed a sense of adventure, and enjoyed the outdoors and the challenge of independent practice. Thus our findings suggest physician recruiters should focus on doctors with personality features similar to those described above to increase their chances of successful recruitment and retention.

Limitations

There were a number of limitations to this study. Drawing conclusions is hampered by the small sample size. The lack of response from our targeted subjects may be due in part to the busy nature of the life of family physicians — they often simply lack the time to participate in anything other than work related to their practices. Further, the research was conducted through summer months and some physicians may have been on holiday. Finally, we were unable to locate and interview IMGs.

Conclusion

The different types of physicians who ventured north reveal that there is no ideal physician demographic: every group has its own benefits and drawbacks. There are, however, several strategies that might improve the quality of physicians being recruited and the chance that some physicians

might stay for longer periods of time. To some extent, it is true that the government of the NWT is taking any physician it can recruit; the young physicians who are fresh out of residency may lack the experience required to work as a solo physician, while the foreign graduates may not be licensed to work in Canada and, though generally good physicians, there is no guarantee that they have the skills possessed by Canadian graduates. Physicians at the end of their careers provide a wealth of experience but are sometimes only putting in time until they can start their retired life elsewhere.

The key to successful recruitment in the remote Canadian North seems to be locating individuals within each of the demographics who enjoy working with Aboriginal people, who enjoy the challenge and adventure of remote medicine and who take pleasure in the outdoors. Finally, guaranteeing locum coverage for CME and vacations, and providing accommodation for permanent physicians might improve recruitment and retention. Liidlii Kue/Fort Simpson's new designation as a 2-physician community will likely have a large and beneficial impact on recruitment.

If one views the recruitment and retention problems of Liidlii Kue/Fort Simpson as being similar to those found elsewhere in Canada and, indeed, the world, then it is likely that system-wide reforms are needed. Rourke[7] suggested several strategies for making rural practice a more popular choice for practitioners: promoting medicine to rural high school students, exposing undergraduate medical students to rural practice, increasing financial support for rural doctors to attend CME, updating hospital equipment at small rural hospitals and increasing locum support for rural doctors who are burdened by unreasonable on-call schedules. Though he proposed these remedies in 1993, the majority of them were never implemented to the extent that they actually made a difference.

Based on current data and an examination of 156 years of physician recruitment and retention, the dream of having full-time resident physicians in a community like Liidlii Kue/Fort Simpson may be just that — a dream — unless the current challenges can be addressed.

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References

1. Ontario Ministry of Health and Long-Term Care. Access to quality care in rural and northern Ontario. Available: www.health.gov.on.ca/english/public/pub/ministry_reports/rural/ruralca.html (accessed 2008 June 10).
2. Miller Chenier N; Political and Social Affairs Division. Government of Canada. The federal role in rural health. October 2000. Available: http://dsp-psd.tpsgc.gc.ca/Collection-R/LoPBdP/BP/prb0020-e.htm (accessed 2008 June 18).
3. Society of Rural Physicians of Canada. Comparative regional statistics. Available: www.srpc.ca/numbers.html (accessed 2008 June 18).
4. Hunt LACO. *Rebels, rascals, and royalty: the colourful north of LACO Hunt*. Yellowknife (NWT): Outcrop; 1983.
5. Health Canada. Available: www.hc-sc.gc.ca/ahc-asc/media/nr-cp/2005/2005_29bk1_e.html (accessed 2007 Nov 15).
6. NWT Bureau of Statistics. Government of the Northwest Territories. 2006 NWT physician survey. May 2006. Available: www.hlthss.gov.nt.ca/pdf/reports/human_resources/2007/english/physician_survey_report.pdf (accessed 2008 June 18).
7. Rourke JT. Politics of rural health care: recruitment and retention of physicians. *CMAJ* 1993;148:1281-4.
8. Mayo E, Mathews M. Spousal perspectives on factors influencing recruitment and retention of rural family physicians. *Can J Rural Med* 2006;11:271-6.
9. Duplantie J, Gagnon MP, Fortin JP, et al. Telehealth and the recruitment and retention of physicians in rural and remote regions: a Delphi study. *Can J Rural Med* 2007;12:30-6.
10. Jakubek D. 2005. Map showing the location of Fort Simpson, NWT. 2001 Census, provinces and territories [cartographic boundary files]. Toronto (ON): Ryerson University Library Geospatial, Map and Data Centre.
11. Abel K. *Drum songs: glimpses of Dene history*. Montréal (QC): McGill–Queen's University Press; 1993.
12. Lesage S. *Sacred Heart Mission 1858–1958: A historical sketch*. Fort Simpson (NWT): Unpublished document. 1959. Available at the library of the Visitor Information Centre in Liidlii Kue/Fort Simpson.
13. Michaelis S. *St. David's Church, Fort Simpson: 1858–1953*. Yellowknife (NWT): The Diocese of the Arctic; 1954.
14. Cresswell JW. *Qualitative inquiry and research design*. Thousand Oaks (CA): Sage; 1989.
15. Toman C. George Spence: Surgeon and servant of the Hudson's Bay Company. *Can Bull Med Hist* 2001;18:17-42.
16. Bunyan I, Calder J, Idiens D, et al. *No ordinary journey: John Rae arctic explorer 1813–1893*. Montréal (QC): McGill–Queen's University Press; 1993.
17. Sutherland A. *Northerners say: "Thanks, Sisters."* Ottawa (ON): Tri-Graphic Printing Limited; 1996.
18. Milnes A. GWNT Health and Social Services responds to community concerns. *Deh Cho Drum*. 1997;Aug 28:3.
19. O'Meara D. Foreign-trained physicians need residency spots. *CMAJ* 2004;170: 10.1503/cmaj.1040479.
20. Thind A, Freeman T, Cohen I, et al. Characteristics and practice patterns of international medical graduates: How different are they from those of Canadian-trained physicians? *Can Fam Physician* 2007;53:1330-1.
21. Mercenary. *The concise Oxford dictionary of current English*. 9th ed. Oxford: Clarendon Press; 1995. p. 582.