
Current Issues Series

**The Retention of Physicians in Rural Areas:
The Case of Nova Scotia**

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**Published by
IRC Press
Industrial Relations Centre, Queen's University**

ISBN: 0-88886-472-8
© 1998, Industrial Relations Centre
Printed and bound in Canada

Industrial Relations Centre
Queen's University
Kingston, Ontario
Canada K7L 3N6

Publications' Orders: 613 545-6709

Canadian Cataloguing in Publication Data

Nestman, Natasha Alynn, 1972-
The retention of physicians in rural areas : the case of Nova Scotia

(Current issues series)
ISBN 0-88886-472-8

1. Medicine, Rural - Practice - Canada - Case studies. 2. Physicians Recruiting -
Canada - Case studies. 3. Medicine, Rural - Practice - Nova Scotia. 4. Physicians -
Recruiting - Nova Scotia. I. Title. II. Series: Current issues series (Kingston, Ont.).

R729.5.R87N47 1998

362.1'72'0971

C98-9331361-1

Executive Summary

This study focuses on the problem of alleviating physician shortages in rural areas of Canada, with particular reference to Nova Scotia. While health care agencies and governments have implemented aggressive *recruitment* strategies to solve the problem, they have not attempted to improve the *retention* of physicians in rural areas. Using the results of her survey of rural physicians across Nova Scotia, the author recommends various incentives that would aid in the retention of rural physicians, which is the key to improving medical accessibility for rural residents.

- The greatest sources of dissatisfaction among rural physicians are lack of time off and working hours. A pool of licensed doctors must be maintained to provide rural physicians with relief from their practice. A special funding system should be developed for this purpose.
- Rural physicians are acutely frustrated with earnings, since the fee-for-service system does not compensate them for the unique and varying characteristics of rural practice. The survey indicated physicians would prefer a salaried system.
- Physicians felt the most important incentive the province could implement would be an additional payment for on-call services after hours and on weekends.
- Rural physicians are dissatisfied with their status in the health care field. Medical schools have helped create a strong bias against rural practice, and provincial medical associations have failed to provide effective support for rural physicians, who need to feel more valued by regulatory bodies, medical schools, and government.
- Rural physicians were not generally dissatisfied with reduced availability of acute care services and specialty services. Only about 50 percent of those surveyed felt additional technology, such as telemedicine, would improve their practice, and over 80 percent said it would have to be subsidized before they would agree to use it.
- While physicians may resist sharing their medically delegated functions with other health care professionals, the province should consider using nurse practitioners to provide greater support to rural doctors. Working conditions might improve dramatically.
- The author concludes that individual, sporadic programs will not solve the problem of retaining physicians in rural areas. The government must make a continuing commitment to deal with the problem, which will require years of planning and forward thinking.

Introduction

Since the establishment of the *Canada Health Act* in 1960, universal and equal access to health care has been one of Canada's most precious values (Northcott 1994, 66). But over the last few decades accessibility to physician services has been threatened—most especially in remote, isolated areas. While 23.5 percent of Canadians live in rural areas, including communities with populations up to 10,000, only 17 percent of family physicians work in these areas (Rourke 1993, 1281). Consequently, many rural communities are in desperate need of physicians.

Health care agencies and governments have attempted to remedy the inequities, but with limited success. They have implemented aggressive recruitment strategies but have often not attempted to improve the *retention* of physicians in rural areas. Without a strong commitment to both recruitment *and* retention, it is unlikely that medical accessibility in rural areas will improve.

This study focuses on the problem of retaining physicians in rural areas of Canada, with particular reference to Nova Scotia. It begins by reviewing the professional, economic, and cultural barriers to rural practice. It then discusses the strengths and weaknesses of initiatives developed in Nova Scotia to help retain rural physicians and proposes some alternatives. It concludes with a discussion of the results of a mail survey sent to rural physicians across Nova Scotia for the purpose of establishing how satisfied physicians are with various aspects of rural practice and rural life, and of uncovering incentives that might aid in the retention of rural physicians.

Rural Medicine

Physician Shortages in Rural Nova Scotia

Nova Scotia has one of the highest physician-population ratios in Canada (Rogers 1997, 2). However, inequities in the geographic distribution of physicians has meant that many rural areas are experiencing physician shortages. While 46 percent of the population is rural, only 20.5 percent of physicians practise in rural areas of Nova Scotia (Reamy 1994, 135). Consequently, in 1995, twenty communities in rural areas of Nova Scotia were found to be under serviced. No practitioner was available to patients within thirty minutes travelling time. Furthermore, specialty services were unavailable within 90 minutes travelling time (Rogers 1997, 1). The exodus of rural physicians from rural practice has largely contributed to this problem. Approximately 130 physicians left Nova Scotia between 1991 and 1995—many of them had practised in rural areas (Rogers 1997, 3).

Personal and Geographic Influences on Retention Rates

Various personal, and social, and geographic variables influence the retention rates of rural physicians.

Background

Physicians with rural backgrounds, according to the literature, are more likely to locate in a rural practice and more likely to stay. Presently, approximately half of all

Over the last few decades accessibility to physician services has been threatened.

rural doctors come from a rural background. If their numbers were to increase, retention rates would probably improve.

Age

Older physicians apparently have higher retention rates than younger physicians (Pathman and Konrad 1992, 1555), whose training and education places a great deal of importance on information-sharing and consultation with colleagues (Connors, Hillson, and Krawelski 1995, 1068).

Characteristics of Rural Settings

Retention rates are lower in rural areas with the highest proportion of the population working in agriculture and the lowest median incomes. Low-income farming families demand a smaller volume of physician services, but physicians tend to locate where they expect to maximize income, which leads them to move from smaller rural centres to larger rural communities (Brown 1993, 1301).

Location of Rural Practice

Retention rates are generally lower in rural communities that are further from urban centres, where physicians generally report the least professional satisfaction (Rourke 1993, 1282). In these smaller rural communities, factors such as professional isolation are likely felt more acutely than in larger rural communities or in urban centres.

Professional and Organizational Barriers

Hours of Work

Rural physicians work longer hours than their urban counterparts, partly because of unreasonable on-call requirements. In a survey conducted by the Saskatchewan Medical Association in 1996, almost one-quarter of the physicians polled in rural Saskatchewan stated that they were on call twenty-four hours a day, seven days a week. These physicians cited excessive hours of work as the largest source of dissatisfaction with rural practice (Saskatchewan Medical Association 1996, 1). Similarly, in a survey of rural physicians across the country by the College of Family Physicians of Canada 50 percent of rural physician respondents found being on call to be a significant problem: 'no aspect of rural practice further sets apart rural physicians from their urban counterparts than the responsibility of being on call' (Martel 1995, 975). O'Reilly has found that 'compared with their urban counterparts, rural physicians work longer hours, suffer more fatigue and sleep deprivation, have higher rates of dysfunctional family life, endure professional isolation, and are more likely to die on the job than retire' (1994, 4).

Variable Levels of Demand

The problem of excessive hours of work is further exacerbated by unpredictable variations in the quantity and type of services demanded in rural areas. Because rural physicians have few opportunities to reduce the 'risk' of variable excess demand by relying on other physicians for support, the inability to predict the peaks in demand

Physicians tend to locate where they expect to maximize income.

is particularly problematic (Connors, Hillson, and Krawelski 1995, 1068). Women, especially young female physicians are particularly averse to variable excess demand and are strongly inclined to select salaried positions that offer limited and fixed working hours (Crandall, Dwyer, and Duncan 1990).

Lack of Specialist Back-Up

With little opportunity for interactive consultation with specialists, many rural physicians are left more or less on their own to deal with patient needs. In emergency situations, where consultative back-up is urgent, the lack of specialists is particularly problematic.

Unreliable Access to Locum Services

Increasingly, many physicians are not provided with adequate relief for vacations, continuing education, maternity leave, or illness. Until very recently, rural physicians in Nova Scotia were required to find their own replacements for time away from practice (Martel 1995, 975), and if they were unable to do so, they were simply forced to continue working.

Complexity and Scope of Rural Practice

The scope and complexity of medical practice is greater in rural areas than in urban centres (Canadian Medical Association 1989, 35). In a study conducted in Manitoba, it was found that ‘physicians in rural areas provide more hospital, emergency and obstetrical care than do their urban counterparts; the former also perform four times as much surgery and twice the minor procedures done by the latter’ (Carter 1987, 1713–15). These additional technical procedures require specialized skills and knowledge. Increased pressure is also being placed on rural physicians to deal with social psychological and psychiatric problems that go beyond the traditional scope of their practice (Buckley 1997, 7). Rural physicians often have to face increasing levels of responsibility without basic support services (for example, lab facilities) and with limited specialist back-up (Black 1982, 1872–6). In many rural areas, especially smaller ones, the physician is more than the ‘gatekeeper’; s/he may represent the entire health care system (O’Reilly 1994, 571–3).

Professional Isolation

Medicine relies heavily on interactions between colleagues for support, training, and recommendations, but rural physicians often have difficulty establishing and maintaining contacts with colleagues, due to geographic and social isolation. In addition, limited access to specialized medical information has been felt very strongly by rural physicians, who are sometimes left with unanswered questions because of insufficient information services (Dee 1993, 259).

Inadequate Rural Training

‘Medical education typically takes place in a large teaching hospital . . . far removed from the realities of rural practice. Many physicians entering rural practice complain that they are poorly prepared to deal with the primary care needs of their patients because they were trained in settings where highly

Increased pressure is being placed on rural physicians to deal with social psychological and psychiatric problems that go beyond the traditional scope of their practice.

sophisticated diagnostic and treatment technologies were used' (Carpenter 1982, 76). A study conducted by the College of Family Physicians of Canada found that more than 30 percent of family physicians believed their training was inadequate in preparing them for rural practice (Martel 1995, 974–6). Moreover, rural physicians find it more difficult than their urban counterparts to develop, enhance, or even simply maintain their knowledge base.

Community Support

Many physicians feel they do not receive adequate support from their communities (Martel 1995, 976), because some rural residents seek health care services from larger, urban centres, perhaps believing that urban medical centres provide superior health care. They may also feel that rural physicians are 'less qualified' (Rieber 1996, 46–50). And because of high physician turnover, rural residents may lack confidence in their rural physicians, which makes the professional and social integration of the physician more difficult.

Economic Barriers to Retention

The Fee-for-Service System

In Canada the fee-for-service system is the predominant form of payment of physicians (Dickinson 1994, 113). Under fee for service, physicians' remuneration is based on the number of patients seen and the number and complexity of procedures performed.

This payment system does not serve rural doctors well, for several reasons. It tends to promote competition among established and new physicians in small, rural markets (PAIRO 1996, 11). Furthermore, it fails to take into account the scope and complexity of rural practice and neglects to compensate rural physicians for such factors as professional isolation, unreasonable on-call requirements, and important levels of clinical responsibility (Loveridge 1996, 31). In smaller communities with sparse populations physicians often see too few patients to sustain their medical practice.

The relative income differential between rural and urban physicians under the fee-for-service system is clearly a source of dissatisfaction (Canadian Medical Association 1989, 31). In a survey conducted in rural Saskatchewan, over 80 percent of respondents revealed that they were dissatisfied with the fee-for-service remuneration system. Many felt that an additional on-call stipend, fee-for-service differential, or some type of tax break was necessary for rural physicians (Saskatchewan Medical Association 1996, 4).

Institutional Barriers

Many of the problems just discussed stem from a lack of adequate external support for rural practice. There is a widespread perception that educational institutions, provincial and national medical societies, the government, and the media have failed to understand and promote the value of rural practice and that the needs of urban physicians take precedence over the needs of rural physicians (Loveridge 1996, 29).

The fee-for-service payment system does not serve rural doctors well.

Medical Schools

Medical schools have helped to create a strong bias against rural practice. While it has been shown that students from rural backgrounds are more likely to set up practice in a rural area and to stay in rural practice over the long term, they continue to be underrepresented in medical schools (Rourke 1993, 1282). Dominant urban values shape the orientation of medical education. Typically, as students ‘pass through the medical education system, they acquire a set of values that reinforces their predisposition to choose an urban location for their practice’ (Cordes 1978, 367). They may develop perceptions of rural practice that are unrealistically negative, and while they may choose rural practice in a ‘last ditch’ effort to find a job, once an opportunity in an urban centre presents itself, they may well choose to leave.

Medical Societies

Provincial medical associations have also been criticized for failing to provide effective support for rural physicians. As Dr. Peter Loveridge, a physician in rural Nova Scotia, reveals, rural physicians feel that they are treated as second-best and strongly undervalued by medical associations dominated by urban interests:

The perception that academic centres currently view rural practitioners as second-rate is widespread among my peers. I have sat on the board of directors of the Medical Society of Nova Scotia for more than a decade and have listened to such gratuitous comments as: ‘We are going to graduate so many doctors that they will have nowhere to go other than the rural areas’ or ‘These fellows wouldn’t be out there if they could make a living anywhere else.’ (Loveridge 1996, 29)

Clearly, such negativity does little to promote rural practice or to alleviate the shortage of rural physicians.

Government

In pursuing cost-containment measures, the government has failed to recognize the distinct nature of rural practice (Robb 1995, 625–31). Hospital closures have created particular problems for rural physicians, who are faced with greater numbers of acutely ill patients in their hospitals. The availability of hospital resources for physicians strongly affects the retention of physicians in rural areas (Crandall, Dwyer, and Duncan 1990, 25).

Rural physicians also feel threatened by the government’s attempt to decrease the relative supply of physicians across the country (Dickinson 1994, 113), which will probably be felt more strongly in rural communities than in urban centres.

Positive Professional and Lifestyle Aspects of Rural Practice

Discussion of the positive aspects of rural practice, which are rarely mentioned in the literature, might help to overcome some stereotypes and misconceptions.

Professional freedom and autonomy are attractive incentives to rural practice. As one young rural doctor in Newfoundland describes it, ‘The ability to make decisions

In pursuing cost-containment measures, the government has failed to recognize the distinct nature of rural practice.

based on your clinical judgment . . . is very attractive. Rural medicine is the closest thing to pioneer medicine that many of us will ever experience' (Graham 1996, 17 18). More personalized patient care is also viewed as a strong advantage of rural care, as is the diversity of rural practice (Cordes 1993, 363).

In many remote communities the beauty of the natural environment is an important incentive to rural practice—an advantage that needs to be better promoted. In a survey conducted by the College of Family Physicians of Canada in 1994, 80 percent of respondents reported satisfaction with rural life, and 90 percent of respondents reported that they were satisfied with their work (Perkin 1994, 632). Based on such intriguing and paradoxical findings, one could argue that if rural areas could simply succeed in attracting physicians, they would find professional satisfaction (Martel 1995, 975). If this is the case, the portrayal of rural practice would be central to resolving the physician shortage in rural areas.

The geographic distribution of physicians is fundamental in ensuring access to health care for rural communities.

Human Resource Initiatives

Because the geographic distribution of physicians is fundamental in ensuring access to health care for rural communities, there has been a substantial attempt to recruit and retain physicians in rural areas of Canada. In this study, I examine the initiatives which have been developed in Nova Scotia.

In 1989 the Nova Scotia Royal Commission on Health Care recommended that the government make concrete efforts to improve the geographic distribution of physicians. The Task Force on Physician Policy Development was established to study the problem. After extensive research, it advised the Medical Society of Nova Scotia and the government to work together to tackle the problem of recruiting and retaining rural physicians by implementing several initiatives to lessen the largely professional disincentives of rural practice (Reamy 1994, 135). Many of the retention strategies are based on the following four conceptual models described by Crandall, Dwyer, and Duncan (1990).

The Affinity Model

The affinity model presupposes that certain physicians may have a greater predisposition to rural practice, for instance, physicians originating from rural backgrounds and medical students who have been exposed to rural practice (Crandall, Dwyer, and Duncan 1990, 19–38). It is assumed that greater professional satisfaction among these groups will lead to higher retention rates.

Medical School Partnerships

The province of Nova Scotia has made efforts to provide medical students attending Dalhousie University with adequate training and exposure to prepare them for rural practice. In 1993 a summer rural program for students was designed to place second-year undergraduate students attending Dalhousie University in residency for four weeks in rural Nova Scotia or New Brunswick. Between 1993 and 1997 several rural studentships were awarded annually. In addition, all family medicine students are now required to complete a twelve-week rotation during their second

year of studies that includes a rural element in either New Brunswick or Nova Scotia.

Weaknesses of the Program

Unfortunately, many of the programs are based in semi-rural areas such as Truro and Amherst. More isolated and remote areas, which are in greater need of physicians, have been neglected. Furthermore, current licensing arrangements require students to be supervised by established physicians. However, rural physicians do not always have the time or energy to become a mentor for students in training (Martel 1995, 974).

The Practice-Characteristic Model

The practice-characteristic model presupposes that because rural practice is demanding, it requires additional support to improve nonpecuniary aspects, including locum services, hospital facilities, and telemedicine (Crandall, Dwyer, and Duncan 1990, 19–38).

Locum Replacement Services

At present, the province of Nova Scotia has committed itself to providing locum services for rural physicians. The Medical Society of Nova Scotia has developed a locum service to provide physicians with time for vacation and continuing education. It is hoped that two to four full-time locum physicians will travel around the province to fill in for established physicians who are on leave of absence. The locum physicians would receive an annual net salary of \$100,000 (Robb 1996, 1616). Although locum services have improved over the years, they remain inadequate (Martel 1995, 974).

Information Technology

As the literature has revealed, rural physicians often have difficulty accessing timely and relevant information for proper patient care. One suggestion is to establish a system of telemedicine that would provide rural physicians with better communication with colleagues and specialists, faster and more accurate diagnosis, and greater on-site opportunities for continuing education.

In 1996 the Provincial Health Care Department and TecKnowledge Health Care Systems jointly launched a pilot project to administer telemedicine in three rural communities in Nova Scotia, linking them with the Queen Elizabeth II Health Sciences Centre and Dalhousie University in Halifax. The project included continuing education, teledermatology, and teleradiology (Rogers 1997, 18).

Overall, the project was seen to be a positive incentive for rural physicians involved in the study, who benefited from interactive consultation. Specialist back-up was seen to be particularly valuable for rural physicians involved in the teledermatology and teleradiology pilots. Video conferencing provided greater opportunities for continuing medical education, while reducing travel costs and lost practice time (Rogers 1997, 18).

However, there are significant barriers to the implementation of telemedicine. Because consultation through telemedicine is more time-consuming, physicians will

Although locum services have improved over the years, they remain inadequate.

be obliged to spend more time with each patient—ultimately limiting their income (Rogers 1997, 18). If there was little economic incentive for implementing such a program, it is questionable how popular it would be with physicians. Furthermore the province would likely have to invest substantially in such a program. In an era when health care funding has been significantly reduced, it is questionable how willing the government will be to do so, and it is at any rate unclear at the moment what effect telemedicine would have on retention rates, since no research has been conducted in Nova Scotia or elsewhere in the country on the direct influence of telemedicine on retention rates.

Nurse Practitioners

In the United States nurse practitioners have provided increased support to rural physicians (Conrath 1983, 20). One study found that nurse practitioners could handle independently almost 70 percent of patient cases.

Some studies have shown that nurse practitioners are more willing to work in rural areas than their physician counterparts (Conrath 1983, 20) and are more likely to stay over the long term; they have very different professional expectations, values, and training from physicians. If nurse practitioners were able to provide greater support to rural doctors, the working conditions of rural practice might improve dramatically.

Nonetheless, historically, some physicians have been reluctant to relinquish many of their medically delegated functions to nurse practitioners. One reason stems from the lack of clarity surrounding the medical responsibilities of nurses: for example, it is not clear whether diagnosis and treatment for common disorders are within the scope of competencies for registered nurses. In addition, many physicians are acutely aware that expanding the role of nurse practitioners may limit or even reduce their financial support (Sutherland 1996).

The Economic Incentive Model

The economic-incentive model presupposes that physicians will work where it is economically advantageous (Hurley and Labelle 1994, 13) and that economic incentives will improve recruitment and retention rates.

Physician Incentive Programs

Nova Scotia has developed an incentive package for underserved areas that provides for a minimum annual salary of \$138,000, a \$50,000 bonus, moving expenses, and other assistance.

Although incentive programs are useful in recruiting physicians, it is questionable whether they will help to retain more physicians in rural areas. In fact, they may simply provide short-term ‘fixes’ (Robb 1996, 1616) by encouraging certain doctors, particularly young graduates, to move into rural areas, earn a high income, and then leave for an urban centre shortly after arriving. Furthermore, because such an economic incentive package is not designed for physicians already established in rural areas, it may increase

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competition between new and established physicians, leading to strained and difficult work relationships. Established physicians may become increasingly resentful of their own remuneration. Rural-practice premiums might be a more appropriate method of retaining physicians (Rourke 1993, 8).

Different Remuneration Systems

As was discussed earlier, the fee-for-service payment system does not serve rural doctors well because it fails to take into account the scope and complexity of rural practice. One solution proposed by the Society of Rural Physicians of Nova Scotia would be to develop a different remuneration system for four types of rural practice: (1) group practices of three or more physicians with a population base of 5,000 or greater, (2) group practices of three physicians (two most of the time) with a population base of 3,000 or less, (3) practices in geographic areas with two physicians with a population of less than 3,000, and (4) solo practices in large geographic areas (Buckley 1997, 17).

These four groups of physicians would be remunerated differently, taking into account the unique characteristics of rural practice, including professional isolation and complexity of practice. Factors such as continuing medical education, on-call services, and locum services would receive substantially greater monetary support.

The Indenture Model

The indenture model presupposes that programs need to be developed to commit physicians to rural areas for a fixed period of time (Crandall, Dwyer, and Duncan 1990, 31). For instance, physicians might be required to practice in a rural area for a given time period in exchange for financial incentives in the form of loan repayments or bursaries. The province of Nova Scotia has not committed itself to such incentives, but in Ontario bursaries have been awarded to medical students who are willing to practice in Northern Ontario. Recipients must commit to one year of service for every year of bursary assistance.

While these programs might help to recruit physicians to rural areas, it is unlikely that they will compel physicians to stay once their service has been met. They are only a short-term solution to an ongoing problem. In fact, in Ontario close to 50 percent of participants have ‘bought out’ of the program before their service time has been completed.

Conclusions

Although retention initiatives have made important contributions to rural practice, professional and lifestyle problems of rural physicians must be dealt with. Many of the initiatives have failed to address problems of professional isolation, limited access to continuing education, excessive workloads, limited access to information, limited specialist back-up, and so on. Some of the initiatives proposed in this study, including telemedicine and greater support from other health care professionals, might help to address some of these problems.

Many initiatives have failed to address problems of professional isolation, limited access to continuing education, excessive workloads, limited access to information, limited specialist backup, and so on.

Any solution proposed by policy makers must be approved by rural physicians, however, or it will be difficult to implement. In the final sections of this study I examine the results of a survey developed to establish how satisfied physicians are with various aspects of rural practice and rural life and to uncover incentives that might aid in the retention of rural physicians.

Survey of Rural Physicians in Nova Scotia

Purpose

In the last week of May 1997 I conducted a mail survey of rural physicians in Nova Scotia. The main purpose was to provide direction to the Nova Scotia Department of Health and the Medical Society of Nova Scotia on incentives to assist in the retention of physicians in rural areas of the province.

Research Methodology

The survey was sent to fifty fully licensed physicians practicing in communities of fewer than 10,000 residents. The list of physicians was derived randomly from the Nova Scotia Medical Association Databank.

Responses were received from 26 doctors, representing a response rate of 52 percent. The survey sample was a proper representation of rural physicians with regard to gender: 20 percent of the sample group were female; 80 percent were male. The sample was relatively small, however. Hence, the results may not truly reflect the sentiments of rural physicians as a whole in Nova Scotia. In addition, certain questions may have been interpreted differently by respondents. For instance, physicians were asked to rate their 'professional freedom.' Such an ambiguous term may leave room for various interpretations.

Survey Results

Lifestyle and Professional Aspects of Rural Practice

Physicians were asked to rate their satisfaction with a number of factors affecting their professional and social lives, including such factors as time off, work hours, earnings, status, professional freedom, professional satisfaction, continuing medical education opportunities, cultural opportunities, etc. Lack of time off and working hours were the greatest sources of dissatisfaction among physician respondents. Earnings and status in the health care system were cited as major sources of dissatisfaction.

The dissatisfaction with working hours is likely due to demanding on-call requirements. Approximately 8 percent of respondents stated that they were on call twenty-four hours a day, seven days a week. Over 40 percent were on call one in three days.

Similarly when asked to identify the characteristics with which they were most dissatisfied, respondents once again cited time off and working hours as the greatest

sources of dissatisfaction. Earnings were the third greatest source of dissatisfaction. Surprisingly, professional freedom, often viewed as an advantage of rural practice, was also viewed as a major source of dissatisfaction by more than 10 percent of respondents. However, as mentioned, since the term ‘professional freedom’ may be interpreted very differently from one physician to another, it may not be possible to draw solid conclusions from this response.

Recreational activities and housing were cited as two of the three most important sources of satisfaction. Interestingly, professional satisfaction was cited as the second greatest source of satisfaction among rural physicians, even though, as we have just seen, more than 10 percent of respondents also said they were most dissatisfied with their failure to find professional satisfaction.

When physicians were asked whether the addition of communication technologies would aid them in conducting their practice, 56 percent said it would, while 44 percent said it would not. Of those interested in communication technologies for rural practice, 83 percent of physicians stated that technologies would have to be subsidized before they would consider using them.

Incentive and Enhancement Programs for Rural Practice

Physicians were asked to rate a number of incentive/enhancement programs that might assist in the retention of physicians in rural areas, such as locums, on-call payment, holidays, pay differential, tax break, sabbatical, etc. In general, most of the options were viewed as very important or extremely important. Enhanced locum replacement services, extra payment for rural emergency room on-call shifts, and four weeks of paid holiday per year were cited as the most important options. Clearly, locum replacement services and four weeks of holidays are closely related, since physician holidays depend very much on the availability of locum replacements. Close to 90 percent cited enhanced locum replacements as very or extremely important. Over 80 percent cited extra payment for rural emergency room on-call shifts as very or extremely important.

When asked to identify the top incentive that should be pursued, over 60 percent chose the on-call payment. A fee-for-service pay differential, enhanced locum services, and four-week holidays followed close behind.

The majority of respondents felt that between \$51 and \$75 per hour was a fair on-call premium.

Future Career Plans

When physicians were asked whether they intended to continue practising in rural Nova Scotia, there was a great deal of variation in the responses (table 1). In the coming year, 14 out of 19 physicians planned to remain in rural Nova Scotia. In the next three years, 13 out of 17 were planning to leave rural practice; in the next five years, 15 out of 27. Among all respondents, 5 physicians revealed that they planned to stay in rural practice for the next five years.

Sources of Greatest satisfaction

- 1** Recreational activities
- 2** Housing
- 3** Professional satisfaction

Table 1
Future Career Plans

	Next year	Next 3 years	Next 5 years
Continue in present practice	14	4	12
Retire	0	1	1
Move to a larger rural community in Nova Scotia	0	0	0
Move to an urban community in Nova Scotia	1	1	1
Move to practise medicine in another province	1	5	5
Move to practise medicine in the United States	2	5	5
Specialist training	0	1	1
Other	1	0	2
Total (may not add to 26 due to multiple responses)	19	17	27
Remain practising in rural Nova Scotia	14	4	12
Move, retire, or retrain	5	13	15

Strategies for Improving Rural Practice

The results of the survey presented in the previous section reveal that several serious problems of rural medicine need to be addressed.

1. **Locum service replacements.** Among rural physicians, the greatest sources of dissatisfaction are lack of time off and working hours. It is essential for the province to improve locum services, which are now clearly inadequate. A pool of licensed doctors must be maintained to provide rural physicians with relief from their practice. As proposed in this paper, the province might develop a special funding system for this purpose. Locum replacements could be compensated for their travel and living expenses, and they could be granted a special additional payment to account for such factors as professional isolation.
2. **Earnings.** Rural physicians are acutely frustrated with earnings, since the fee-for-service payment system does not compensate them for the unique and varying characteristics of rural practice. As one rural physician revealed: '[I am] poorly compensated for the work provided. I refuse to see any more patients per hour to compensate for our poor remuneration per patient/service.' Open-ended comments in the survey indicated that physicians would prefer a salaried system.
3. **On-Call Payments.** Physicians stated that the most important incentive the province could implement would be an additional on-call payment; the majority cited between \$51 and \$75 per hour as fair for on-call services after hours and on weekends.
4. **The Status of Rural Health Care.** Rural physicians are clearly frustrated with their status in the health care field, which ranked fourth as a major source of dissatisfaction. They need to feel that they are recognized, understood, and valued by medical regulatory bodies, medical schools, the government, and the media.
5. **The Rural Lifestyle.** Recreational activities and housing were cited as two of the three largest sources of satisfaction with rural practice and life. Paradoxically, professional satisfaction was ranked second.

This might lead one to conclude that if the most problematic aspects of rural practice could be improved, work hours and time off, for example, many rural physicians might find contentment.

6. Telemedicine. Reduced availability of acute care hospital services and specialty services did not rank as important sources of dissatisfaction among rural physicians. One might therefore question the importance of introducing telemedicine to reduce professional isolation. Only 56 percent of survey respondents felt that additional technology would improve their practice, and of those over 80 percent said it would have to be subsidized before they would agree to use it.

7. Nurse Practitioners. Enhanced support from nurse practitioners was not viewed as a very important enhancement initiative. Only 37 percent of respondents felt it would be very important for rural practice, and only 8 percent viewed it as one of the most important incentives.

While it is true that physicians may resist sharing their medically delegated functions with other health care professionals, the province should nonetheless consider utilizing nurse practitioners, who have proven to provide efficient and reliable support for physicians in rural areas.

8. Retention Rates. In the next three years, retention rates are likely to drop dramatically in rural Nova Scotia, with only 4 out of 17 physicians remaining in rural practice. In the next five years, 15 out of 27 physicians are planning to leave rural Nova Scotia. Unless the situation changes, the retention rates of these physicians will be problematic.

9. Frustrations with Patients. Many physicians commented on ‘excessive patient demands’ and felt that they were burdened by unrealistic public expectations. The public must make a greater effort to make reasonable demands on the health care system. As one rural physician said, ‘We need more common sense from the health care consumers so that the abuse of this under-funded system will come to an end.’

Conclusion

It is clear that many factors affect the retention of physicians in rural areas. Individual, sporadic programs will not solve the problem. The government must make a continuing commitment to deal with the problem, which will require years of planning and forward thinking.

Many individuals and organizations must involve themselves in the process. Local physicians established in urban centres, hospital administrative staff, political leaders, and medical societies must all offer their support to rural physicians. In addition, it is imperative that particular individuals be placed in charge of the overall organization and planning of the recruitment and retention programs. Problems of compensation, fringe benefits, hours of work, scope of practice, additional responsibilities, after-hours coverage, locum replacements, and relationships between physicians and the government must be dealt with.

Finally, rural practice must gain the recognition it deserves. The positive aspects of rural practice must be maintained, further enhanced and promoted—both for existing physicians and for those to come.

If the most problematic aspects of rural practice could be improved, work hours and time off, for example, many rural physicians might find contentment.

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