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The language of rural practice

John Wootton, MD
Shawville, Que.

CJRM 2002;7(3):165

My frustration stems from the fact that there exists in French a perfectly good word for an important characteristic of rural practice that I am trying to describe: "la polyvalence." It means being multiskilled, competent in many areas, and is a good word, as opposed to the cumbersome English translations available. Adding to my frustration is the fact that we actually have a perfectly good English word for this concept — "generalism" — but we've wrecked it!

When I emerged from my rotating internship, lo these many years ago, at the Toronto East General and Orthopedic Hospital, I went into general practice. I was a general practitioner. It did not seem odd to choose to practise this generalism in a rural setting; in fact the transition, linguistically at any rate, was very smooth. But quite clearly I was not a specialist, and quickly learned in the court of public and professional opinion that my generalism, far from being a badge of honour, was more like a millstone of mediocrity.

In the fullness of time my profession took umbrage at this debasement of the generalist and responded by rising up and declaring its members to be specialists, but specialists in family medicine. The ensuing years have seen much effort go into the definition of this new specialty, an effort that is aptly summarized in the 5 principles of family medicine. However the virtues of "generalism," if they are there at all, are well buried. Vestiges remain, and authors, to protect themselves, often refer to GP/FPs to be sure to not leave anyone out. More often however they merely succeed in underlining the distinction.

Meanwhile, in Québec, always a place that goes its own way, the old terminology has persisted. "L'Omnipraticien" holds equal sway with "Médecin de famille." "La polyvalence" remains a perfectly useful term to describe a characteristic of practice critical to rural medicine. Language sustains practice to such an extent in Québec that rural physicians here identify much less with the schism that exists in the ROC with respect to urban and rural practice.

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"L'Omnipraticien" holds equal sway with "Médecin de famille." "La polyvalence" remains a perfectly useful term to describe a characteristic of practice critical to rural medicine. Language sustains practice to such an extent in Québec that rural physicians here identify much less with the schism that exists in the ROC with respect to urban and rural practice.

So do I have a word to offer? My only submission (and I invite others) is a term for which I need to reach back several centuries. A "Polymath" as defined by the Oxford English Dictionary is "A person of much or varied learning," and the citation includes this jingle from 1840:1 "The Polymaths and Polyhistor, Polyglots and all their sisters." My sense of the word is that being a polymath was a "good thing."

Obscure perhaps, but could it work? Are rural docs the polymaths of the 21st century? What say you?

Correspondence to: Dr. John Wootton, Box 1086, Shawville QC J0X 2Y0

Reference

1. The compact edition of the Oxford English dictionary. Oxford: Oxford University Press; 1981.

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Pour dire la pratique rurale

John Wootton, MD

CJRM 2002;7(3):167

C'est bien plus par frustration que par érudition, j'en ai bien peur, que je cherche un nouveau mot anglais à ajouter au lexique de la médecine rurale.

Ma frustration découle du fait qu'il existe en français un mot qui illustre parfaitement une caractéristique importante de la médecine rurale que j'essaie de décrire : c'est le mot «polyvalence». Ce mot, qui signifie compétences multiples, compétence dans de nombreux domaines, illustre bien ce qu'il veut dire par rapport aux expressions anglaises trop lourdes disponibles. C'est que nous avons en réalité en anglais un mot qui correspond parfaitement à ce concept — le mot «generalism» — mais nous en avons abusé, ce qui ajoute à ma frustration!

Lorsque j'ai terminé mon internat par rotation, il y a des années, à l'Hôpital Toronto East General and Orthopedic, je me suis lancé en médecine générale. J'étais devenu omnipraticien. Il ne me semblait pas bizarre de décider de devenir omnipraticien en milieu rural. La transition a été en fait très souple, du moins sur le plan linguistique. Il était toutefois très clair que je n'étais pas spécialiste et l'opinion publique et professionnelle m'a montré clairement que loin d'être un insigne d'honneur, mon généralisme ressemblait bien plus au boulet de la médiocrité.

Avec le temps, ma profession s'est offusquée de cette dégradation du généraliste et a réagi en intervenant pour déclarer que ses membres étaient des spécialistes, mais spécialisés en médecine familiale. Au cours des années qui ont suivi, on a consacré d'énormes efforts à la définition de cette nouvelle spécialité, efforts que résumant très bien les cinq principes de la médecine familiale. Les vertus du «généralisme», s'il y en a, sont toutefois très bien cachées. Il en subsiste cependant des vestiges et, pour se protéger, les auteurs parlent souvent des «GP/FP» pour s'assurer de n'oublier personne. Plus souvent qu'autrement, toutefois, ils réussissent simplement à mettre la distinction en évidence.

Entre-temps, au Québec, qui agit toujours à sa façon, la vieille terminologie a persisté. «L'omnipraticien» a autant d'importance que le «médecin de famille». La «polyvalence» demeure un terme parfaitement utile pour décrire une caractéristique de la pratique qui est cruciale à la

médecine rurale. Au Québec, la terminologie sous-tend la pratique à tel point que les médecins ruraux se sentent beaucoup moins concernés par le schisme qui existe dans le reste du Canada entre la pratique en milieu rural et en milieu urbain.

Ai-je une solution? Le seul mot que j'ai à proposer (et j'invite d'autres intéressés à faire de même), c'est un terme qui remonte à des siècles. Selon la définition du Oxford English Dictionary, un «polymath» est «une personne qui a acquis un savoir important ou varié» et la citation comprend cette ritournelle de la décennie 18401 : «The Polymaths and Polyhistor, Polyglots and all their sisters». Ce que je comprends du mot, c'est qu'être polymath, c'était «bon».

Obscur peut-être, mais pourrait-il être utile? Les médecins ruraux sont-ils les «polymaths» du XXIe siècle? Qu'en pensez-vous?

Correspondance : Dr John Wootton, CP 1086, Shawville QC J0X 2Y0

Référence

1. Édition compacte du Oxford English Dictionary. Oxford : Oxford University Press; 1981.

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President's message: 10 years and growing

Jill Konkin, MD
Jasper, Alta.

CJRM 2002;7(3):169-70

The Society of Rural Physicians of Canada (SRPC) recently celebrated its 10th Anniversary at the Annual Rural and Remote Medicine Conference in Kelowna, BC. Our organization has grown from humble beginnings, basement meetings and a small membership, to a confident, successful group whose growing membership ([Fig. 1](#)) can (and does) organize first-class rural CME, research issues of relevance to rural physicians and, among many other issues, lobby for improved training for those wishing to become rural physicians.

We have had some notable successes, including the superb work done by the Obstetrics Committee to support the concept of maternity care in the home communities of delivering mothers. Committee members have highlighted the negative cascade that removing an obstetrics service from a rural community will have, not only on the health care services but on the community itself. They have worked hard to counter the myth that there is a magic number of deliveries that will denote competence in obstetrics.

Rural FP anesthetists have an exciting new program for professional development. The Anesthetics Committee of the SRPC has worked with a number of other organizations to develop a program called Crisis Management in the Simulator (CMS). This program will provide an important avenue for maintenance of skills for rural FP anesthetists. The notice advertising the first courses, to be held in the fall of 2002 in Toronto and Edmonton, can be found on page 206 of the print version of the Journal.

An important initiative that is underway is to work at ensuring that the Canadian Emergency Department Triage and Acuity Scale (known as CTAS) becomes more evidence-based and rural friendly. Work continues on the Rurality Index, a definition of a full-time equivalent for rural FPs; increasing rural-relevant research; promoting the CME needs for FP surgeons and advanced skills training for future FP surgeons; exploring the issues for women in rural medicine; and developing programs to meet rural educational needs, including curriculum and faculty development issues. All this and more while the SRPC continues to advocate strongly for the

interests and needs of rural physicians and allied health professionals throughout Canada.

To all our members who have been active in committee work, thank you for your dedication and hard work. To members who have yet to become involved, remember that many hands make light work. For those of you who receive the CJRM but have yet to join the SRPC, I encourage you to join us. We have common problems. We need to work together to improve health care in the rural and remote areas of this country.

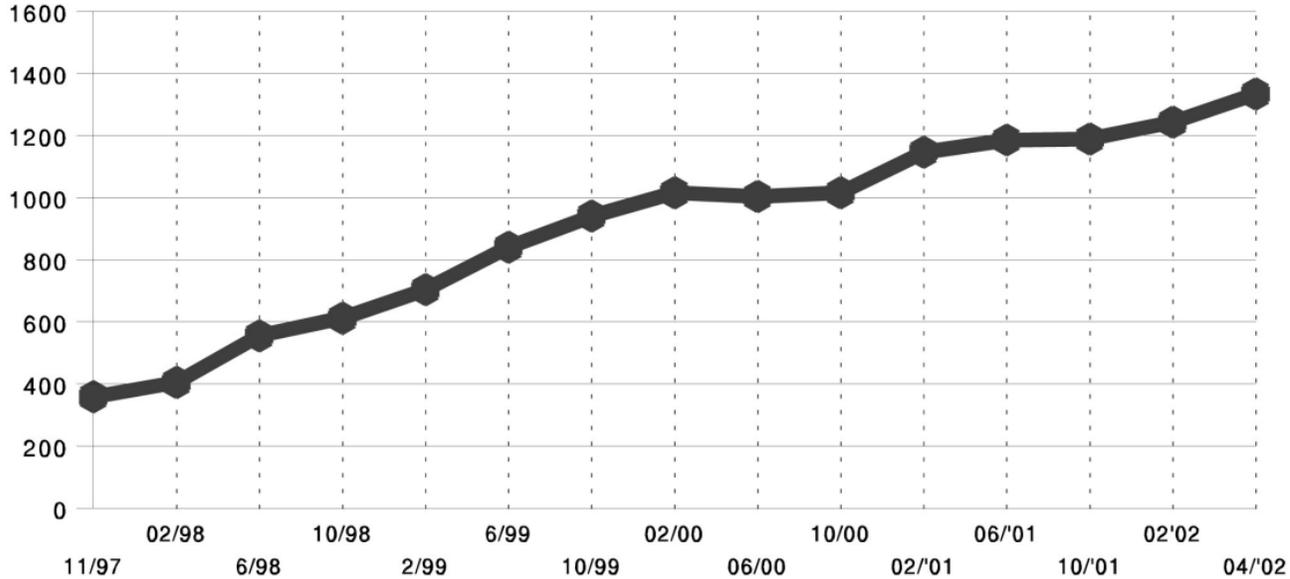
A President is only as good as the people around her. The members of the SRPC Executive and Council are dedicated and talented. I look forward to exciting and productive times for the SRPC.

Correspondence to: Dr. Jill Konkin; jillk@telusplanet.net

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SRPC Membership as of April, 2002



	11/97	02/98	06/98	10/98	2/99	6/99	10/99	02/00	06/00	10/00	02/01	06/01	10/01	02/02	02/02
Members	359	406	556	613	704	841	941	941	1005	1017	1147	1186	1189	1244	1335

Fig. 1. SRPC membership as of April 2002 / Effectif de la SMRC, avril 2002.

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Physicians who stay versus physicians who go: results of a cross-sectional survey of Ontario rural physicians

Ian P. Sempowski, MD, CCFP (EM)
Marshall Godwin, MD, CCFP, FCFP
Rachelle Seguin, BA (Hons), MA

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Objective: To survey and describe the characteristics of physicians who had been practising in one rural Ontario location but left after less than 3 years ("short-term" physicians) and those physicians who practised more than 7 years in the same rural Ontario location ("long-term" physicians). The short-term group consisted of those who had moved to another rural location and a subgroup of physicians who had moved to a nonrural location.

Design: Cross-sectional survey.

Setting: Three categories of rural Ontario towns were studied. Category 1 towns had a population of less than 10 000 and were more than 80 km from a city of 100 000; Category 2 towns had a population of less than 10 000 and were 50 to 80 km from a city of 100 000; and Category 3 towns had populations of between 10 000 and 25 000 and were more than 50 km from a city of 100 000.

Participants: Sixty-two short-term physicians and 172 long-term physicians were identified through the College of Family Physicians of Canada database from 1990–2000 and surveyed by mail.

Main outcome measures: Demographics, medical education, work and community satisfaction, remuneration and access to funded continuing medical education (CME) programs.

Results: Responses from the long- and short-term physician groups are described. Logistic regression was performed in an attempt to identify statistically significant differences between the groups that were independent of other factors. The long-term physicians were more likely to be male, older, on a fee-for-service model, have a higher level of spousal contentedness, a higher presence of children at home, more training in anesthesia, and better access to funded CME

programs.

Conclusions: Spousal contentedness, child-related issues, availability of extra training, and funded CME programs may be areas for future research and interventions to improve long-term retention of rural physicians in Ontario.

Objectif : Recenser et décrire les caractéristiques des médecins qui ont pratiqué dans une localité rurale de l'Ontario mais l'ont quittée après moins de trois ans (médecins «à court terme») et de ceux qui ont pratiqué pendant plus de sept ans dans la même localité rurale de l'Ontario (médecins «à long terme»). Le groupe des médecins à court terme était constitué des médecins déménagés dans une autre localité rurale et d'un sous-groupe de médecins déménagés dans une localité non rurale.

Conception : Sondage transversal.

Contexte : On a étudié trois catégories de villes rurales de l'Ontario. Les villes de la catégorie 1 comptaient moins de 10 000 habitants et étaient situées à plus de 80 km d'une ville de 100 000 habitants; celles de la catégorie 2 comptaient 10 000 habitants et se trouvaient à une distance de 50 à 80 km d'une ville de 100 000 habitants; celles de la catégorie 3 comptaient de 10 000 à 25 000 habitants et se trouvaient à plus de 50 km d'une ville de 100 000 habitants.

Participants : On a repéré 62 médecins à court terme et 172 médecins à long terme dans la base de données de 1990–2000 du Collège des médecins de famille du Canada. On leur a envoyé un questionnaire postal.

Principales mesures de résultats : Caractéristiques démographiques, formation médicale, satisfaction à l'égard du travail et de la communauté, rémunération et accès à des programmes subventionnés d'éducation médicale continue (EMC).

Résultats : On décrit les réponses des groupes de médecins à long terme et à court terme. On a effectué une régression logistique pour tenter de cerner des différences significatives sur le plan statistique entre les groupes et indépendantes d'autres facteurs. Les médecins à long terme étaient plus susceptibles d'être de sexe masculin, plus âgés, rémunérés à l'acte, d'avoir un conjoint plus satisfait, de compter plus d'enfants à la maison, d'avoir une formation plus poussée en anesthésie et d'avoir un meilleur accès à des programmes subventionnés d'EMC.

Conclusions : La satisfaction du conjoint, les enjeux liés aux enfants, la disponibilité de formation supplémentaire et les programmes subventionnés d'EMC pourraient faire l'objet de recherches et d'interventions afin d'améliorer le maintien à long terme des effectifs médicaux en milieu rural en Ontario.

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Introduction

The Canadian health care system has always been challenged by the country's unique geography, with its vast stretches of remote and beautiful wilderness. Nearly one-third of the population lives in rural areas.^{1–4} They are served by just 12.8% of family physicians and 3% of specialists.⁵

Since 1993 there has been a declining number of Canadian graduates entering family medicine.⁶ Only a small proportion of these graduates will establish themselves in a rural area.⁷

Furthermore, as one of the results of long hours and frequent on-call services, rural physicians are giving up crucial activities such as emergency department coverage, obstetrics, inpatient care and general practice anesthesia.^{8–10}

Personal characteristics may predict choice of rural practice location. Physicians who grew up in a rural area are more likely to return to a rural setting.^{11–13} Older males are more likely to stay in rural practice long term.¹⁴ Spousal satisfaction with practice location and spouse's ability to find employment have not been well studied. Similarly, interests in the outdoors and the rural lifestyle have been difficult to study. A 1991 review suggested that a sense of being needed, the quality of relationships, professional freedom and the challenge of the work were commonly cited reasons for satisfaction with rural work.¹⁵

It is widely believed that many graduates shy away from rural practice because they feel poorly qualified to perform many of the extra components of a busy rural practice.¹⁶ Third-year residency positions currently allow only about 20% of residents to secure this type of additional training. The Alberta experience prior to 1997 showed that physicians who completed a third year were more likely to enter rural practice.¹⁷

The Ontario Medical Association (OMA) Continuing Medical Education (CME) Program for Rural and Isolated Physicians has been providing subsidies since 1993 to rural physicians to attend conferences, do clinical traineeships or purchase educational materials. A physician can qualify for a maximum of \$5000 ("maximum" varies annually) of annual reimbursement if the community where their practice is located is on a list of eligible communities (see Category 1 in Methods). Those in our Category 2 qualified for up to \$1000 in annual funding. It is unknown whether these programs contribute to long-term retention of rural physicians.

Access to locums is variable, and a number of programs assist in this regard. However, the demand still far outweighs supply in most Ontario rural regions.

In 1982, Stewart and Bass compared doctors who stayed to those who left the town of Cochrane,

Ont.18 The Canadian Medical Association surveyed larger numbers of doctors in 1991.5 Our study attempts to expand upon these studies by looking at a number of additional parameters in both physician groups.

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Methods

The study was designed as a cross-sectional survey of 2 physician groups: "short-term" physicians and "long-term" physicians. Short-term physicians were those who had been practising in one rural location but left that location after fewer than 3 years; this short-term group consisted of those who had moved to another rural location and a subgroup of physicians who had moved to a nonrural location. The underlying rationale for including in the short-term group those physicians who had moved to another rural location was that communities want long-term continuity with their physicians, and if a physician relocates anywhere else (rural or nonrural) it is considered a loss. Long-term physicians were those who practised more than 7 years in the same rural location. Physicians were identified through the 1990–2000 membership database of the College of Family Physicians of Canada (CFPC). Our survey, as described below, included questions that confirmed the group allocation of each respondent, allowing re-allocation of physicians to study groups. Our final study consisted of 172 long-term physicians and 62 short-term physicians. Physicians were surveyed using a modified Dillman method with 2 follow-up mailings to nonresponders after the initial mailing.

In defining a rural location, we chose 3 community groupings with different levels of rurality. Category 1 consisted of 65 Ontario towns with a population of less than 10 000 and a location more than 80 km from a city of more than 100 000. Category 2 represented 11 towns of less than 10 000 population that were between 50 to 80 km from a city of more than 100 000. Category 3 consisted of 15 larger towns having a population of 10 000 to 25 000 located 50 to 80 km from a city of more than 100 000.

A wide variety of factors were examined that may be associated with long-term retention of rural physicians. These included demographic and personal data, medical education, special skills or extra training, work environment and satisfaction, satisfaction with the community, method of remuneration, and access to locums, as well as access to, and funding for, CME. Content validity of the survey was based on factors identified in other studies as potential predictors of retention. The survey was reviewed by a number of rural and academic family physicians, and modifications were carried out in an attempt to keep the survey concise yet clear and understandable. The questions were answered on a 6-point Likert scale, and this data was then dichotomized into 2 groupings.

Frequencies and percentages were calculated for each factor in both groups of physicians. The 2 groups were then compared using the student's t-test for continuous variables and Chi-squared and odds ratios for dichotomized Likert scale data. Any significant predictors, as well as demographic factors, were then entered into a logistic regression to determine if there were any independent predictors. Study candidates with incomplete data on significant predictors were removed by the regression procedure, giving a total of 209 participants. An analysis was also performed comparing the long-term group to the short-term subgroup that moved to a nonrural area.

This study was reviewed and approved by the Queen's University Research Ethics Board.

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Results

Of the 332 eligible study participants, 234 (70.5%) responded: 172 (73.5%) were long-term and 62 (26.5%) were short-term. [Table 1.](#) details the demographic characteristics. [Table 2.](#) outlines results of the survey factors in the long- and short-term groups. [Table 3.](#) shows the statistically significant differences and the results of a logistic regression to find independently significant results. [Table 4.](#) contains the results of an analysis of the short-term subgroup — the 27 physicians who moved to a nonrural area after practising less than 3 years in a rural location (44% of the entire short-term group).

Demographics

The demographic descriptions of the 2 groups are outlined in Table 1. Long-term physicians were statistically more likely to be male (77.9% v. 56.5%) and were an average of 11.5 years older than the short-term physicians. The majority of both study groups were located in Category 1 towns (the smallest and most rural). The groups showed no significant differences in their proportions in the 3 categories of towns. There was no statistical difference between the groups in regard to whether the physician had lived in a rural location as a child or not.

Medical education

The physicians in the long-term group were less likely to have had exposure to rural rotations in both medical school and residency. In contrast, this group had a higher proportion of physicians with extra training in anesthesia (30.8% v. 12%) and obstetrics (24.4% v. 9.0%). The former was an independent predictor, and there was a trend toward independent significance in the latter ($p = 0.07$). There was no significant difference with respect to advanced surgical skills, emergency medicine training or cesarean section ability.

Work satisfaction and funding model

Overall, 79.3% of our study population was funded by fee-for-service, and long-term physicians were significantly more likely to be paid by fee-for-service. This was shown to be independent of other factors following logistic regression. A higher percentage of the long-term group reported 7 or fewer on-call days per month (60.5% v. 37.1%). They were also more satisfied with support from specialists and with their own ability to get locums than was the short-term group. All 3 of these factors were not independent predictors following logistic regression.

Access to a funded CME program

The long-term group had a significantly higher proportion of physicians who had access to any level of funding (\$1000 or \$5000 maximum) from the OMA CME Program for Rural and Isolated Physicians when compared to the short-term group (74.9% v. 59.6%). This significance was independent of other predictors.

Community satisfaction

The long-term group was more likely to report that they did not feel socially isolated (80.2% v. 46.8%) and were more likely to have spouses who were content with the community (88.6% v. 48.8%). The latter was shown by logistic regression to be a significant independent result ($p < 0.002$), and the former was borderline ($p < 0.06$). Satisfaction with community resources, personal medical care and the education system were statistically different but were not independent of other predictors following logistic regression.

Subgroup analysis

Table 4. outlines a separate analysis of long-term physicians compared to the short-term subgroup (i.e., those who moved to a nonrural location). Significant results were very similar to the main analysis.

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Discussion

Results from this cross-sectional survey have confirmed previous findings^{11,14,15} and identified new factors associated with long-term retention of rural Ontario family physicians. This may help in directing future research, interventions and resource allocation.

The finding that being male was independently associated with rural retention in our study verifies previous results.¹⁴ It may be because women are responsible for a larger proportion of child care in our society, and this conflicts with the longer working hours and on-call responsibilities inherent in rural practice. Long-term physicians were more likely to have children

living at home. Child care programs or incentives and easier opportunities for part-time practice may be areas for future intervention by government or individual communities.

Interestingly, data presented in this study do not support earlier literature that showed that a physician's having grown up in a rural area was associated with retention.¹¹ This finding may reflect changing patterns due to wider information dissemination and awareness of rural medicine and lifestyles.

The 3 categories of communities with differing degrees of rurality did not predict rural retention. This finding warrants further study because this study did not specifically examine the smallest or most remote of towns, which may be the most vulnerable communities with respect to long-term retention.

In this study, exposure to rural rotations in medical school and residency was paradoxically associated with the short-term group, and this likely reflects a bias created by the age difference and different era of medical education for our study groups. No conclusions about the effect of rural exposure in medical school and residency can be drawn from this study. In contrast, there was an independent association with physicians having had extra training in anesthesia and a trend toward their also having had extra obstetrical training in the long-term physician group. Additional third-year training positions may be needed.

Fee-for-service method of remuneration in this study was an independent predictor of rural retention. However, many of the alternate funding plans were originally not available for the older cohort of long-term rural doctors. No conclusions can be made about the effect of different funding models because of this potential bias.

Although the long-term doctors reported a higher satisfaction with access to specialists and locums, and better on-call frequency, these factors were not independently significant. While it may be necessary to place a limit for on-call frequency, this would reduce emergency services if additional physicians are not available. Those areas with a larger on-call/emergency department burden may benefit from extra incentives such as those that have been implemented in Ontario since 1999.

Access to funded CME, specifically through the OMA CME Program for Rural and Isolated Physicians, did show an independent association with long-term rural retention. This finding may provide some early evidence that resources spent in this way may be useful and that additional funding may be justified.

The independent association with increased spousal contentedness and a trend toward significance for less sense of social isolation are very important, and communities may need to address this by looking at ways to integrate doctors and their spouses into rural life. Organized local groups may need to be formed that can integrate doctors and their spouses into social,

cultural, political and other areas of the community.

Results of the subanalysis of doctors who relocated specifically to a nonrural area were similar to the primary analysis, and this may mean that doctors leave because they are dissatisfied with a specific work environment or community situation and not necessarily with rural practice in general. It also validates the decision to include all doctors who relocated to any location in our primary analysis.

The main limitation of this study is the fact that the 2 study groups differed with respect to many factors including sex, age and the era of their medical education.

Only members (noncertified and certified) of the CFPC were surveyed. Results of the College's 2001 National Family Physician Workforce Survey, undertaken as part of the CFPC's Janus Project, show that Ontario physicians who self-report as a rural or remote physician in Ontario in 2001 had a 43% non-CCFP membership status.¹⁹ This large group was not surveyed due to our methodology. It is unclear what differences this cohort may have with respect to survey questions and how it may affect the results.

Some significant results in this study may be linked to other significant factors, and thus we have only chosen to draw conclusions from those that were significant following logistic regression. It may also be true that some of the differences between long- and short-term rural doctors relate to inherent pre-existing differences rather than effects of training, rural practice or rural life itself.

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Conclusions

Our cross-sectional survey suggests that examining spousal contentedness, child-related issues and social isolation may be areas to explore in attempting to retain physicians long-term in one rural location. Rural physicians who are able to obtain extra training such as anesthesia may be more likely to stay in order to use their extra skills. Additional opportunities for training in 3rd-year positions may be needed. Finally, the finding that access to the funded program for CME developed by the OMA was associated with long-term retention demonstrates that additional funding may be needed to expand or introduce similar programs in other areas.

Ian P. Sempowski, MD, CCFP (EM) Assistant Professor; Marshall Godwin, MD, CCFP, FCFP, Associate Professor and Research Director; Rachelle Seguin, BA (Hons), MA, Research Associate, Department of Family Medicine, Queen's University, Kingston, Ont.

Competing interests: We acknowledge the financial assistance of the Ontario Medical Association CME Program for Rural and Isolated Physicians.

Acknowledgements: We thank Dave Williams and Steve Slade, from the College of Family Physicians of Canada, and Kate O'Connor, Lucia Ruhland and Xiaofang Ni, from Queen's University, Kingston, Ont.

Correspondence to: Dr. Ian P. Sempowski, Family Medicine Centre, 220 Bagot St., PO Bag 8888, Kingston ON K7L 5E9; sempowski@post.queensu.ca

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Table 1. Demographics of the study groups				
Variable	Group		Statistics	
	Long-term, no. (and %) <i>n</i> = 172	Short-term, no. (and %) <i>n</i> = 62	χ^2	<i>p</i>
Town Rurality				
Category 1	109 (63.4)	41 (66.1)		
Category 2	22 (30.9)	7 (10.3)	0.17	0.92
Category 3	41 (23.8)	14 (22.6)		
Male	134 (77.9)	35 (56.5)	10.46	0.001
Married or common-law	164 (95.9)	46 (74.2)	24.11	< 0.001
Children at home	156 (91.8)	27 (43.5)	22.16	< 0.001
Rural background	57 (33.1)	22 (36.7)	0.25	0.62
Mean age, yr	48.15	36.68	<i>t</i> test	<i>p</i> < 0.001

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Table 2. Results of the long- and short-term rural physician survey data

Variable	Group		Statistics	
	Long-term, no. (and %) <i>n</i> = 172	Short-term, no. (and %) <i>n</i> = 62	χ^2	<i>p</i>
Medical education				
Less rural in medical school	83 (48.5)	46 (74.2)	12.1	< 0.001
Less rural in residency	88 (51.8)	48 (77.4)	12.3	< 0.001
Extra anesthesia training	53 (30.8)	8 (12.9)	7.6	0.006
Extra obstetrical training	42 (24.4)	6 (9.7)	6.1	0.014
Extra emergency medicine	36 (20.9)	12 (19.4)	0.1	0.79 (NS)
Advanced surgical skills	13 (7.6)	2 (3.2)	1.4	0.23 (NS)
Cesarean section skills	17 (9.9)	4 (6.5)	0.7	0.43 (NS)
Work satisfaction and funding				
On call < 7 days/month	104 (60.5)	23 (37.1)	10.0	0.002
Satisfaction, specialist support	144 (83.7)	43 (70.5)	4.9	0.03
Satisfaction, locum access	131 (79.4)	35 (64.8)	4.7	0.03
Free-for-service funding	145 (88.4)	35 (62.5)	18.8	< 0.001
Satisfaction, support of colleagues	150 (87.2)	48 (77.4)	3.4	0.07 (NS)
Funded CME program				
Access to OMA program	128 (74.9)	34 (59.6)	4.8	0.03
Community satisfaction				
No sense of social isolation	138 (80.2)	29 (46.8)	24.9	< 0.001
Spousal contentedness	148 (88.6)	21 (48.8)	34.4	< 0.001
Satisfaction, community resources	132 (77.2)	28 (45.9)	20.6	< 0.001
Satisfaction, own medical care	161 (93.6)	46 (78.0)	11.5	0.001
Satisfaction, education system	126 (74.6)	22 (52.4)	7.9	0.005

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Table 3. Logistic regression to identify independently significant factors (*n* = 209)

	Adjusted odds ratio (and 95% CI)	<i>p</i>
Fee-for-service funding	10.6 (3.5–31.8)	< 0.001
Children at home	7.7 (2.3–25.9)	0.001
Spousal contentedness	6.3 (2.0–19.8)	0.002
OMA CME program funding	3.1 (1.5–8.4)	0.03
Male	3.4 (1.2–9.7)	0.02
Extra anesthesia training	3.8 (1.1–12.8)	0.03
Satisfaction with own medical care	4.0 (0.9–16.9)	0.06
No social isolation	2.7 (0.9–7.5)	0.06
Extra obstetrics training	3.6 (0.9–14.6)	0.07

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Table 4. Subanalysis of physicians who moved specifically to a nonrural area — statistically significant factors

	Group		<i>p</i>
	Long-term, no. (and %) <i>n</i> = 172	Short-term, no. (and %) <i>n</i> = 28	
Male	134 (78.4)	11 (39.3)	< 0.001
Anesthesia	53 (31.0)	1 (3.6)	0.002
Children at home	156 (92.3)	9 (32.1)	< 0.001
Spousal contentedness	148 (88.6)	6 (35.3)	< 0.001
No social isolation	138 (80.7)	8 (28.6)	< 0.001

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Community obstetrics: a new look at group obstetrical care in rural communities

Neal C. Stretch, MD, CCFP

Caroline A. Knight, MD, CCFP

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Hypothesis: The decline in the number of rural family physicians who practise obstetrics will continue unless new systems for sustainable obstetric services are developed. It is suggested that a shared-call, group system would result in maintenance of this service in rural hospitals and an enhanced lifestyle for rural physicians. It is further suggested that this change can be made while maintaining, or even improving, patient satisfaction and obstetrical outcomes.

Objective: To examine satisfaction with obstetrical care in a shared-call group of general practitioner (GP) obstetricians in a rural setting.

Design: A group of 6 family physicians doing referred-care obstetrics in a rural community of 7000 is described. Survey data from patients, GP obstetricians and nurses were collected for the first 6 months of the shared-call group practice to assess satisfaction of all parties. Fetal and maternal outcome for the 6 months prior to the commencement and for the first 6 months of clinic operation was also evaluated.

Results: Patient acceptance was remarkable, with 100% of respondents rating their satisfaction with the delivery physician at 4 to 5 on a 5-point Likert scale. Ninety-four percent rated it between 4 and 5 on a 5-point Likert scale when asked if they would recommend the clinic to a friend. Physicians noted that the group practice was less disruptive, less stressful and more conducive to time off. Nurses enjoyed the increased involvement in patient care and pre-delivery planning. There was little obvious change in fetal and maternal outcome.

Conclusions: Rural group practice in obstetrics has a high degree of patient acceptance. It appears to be less stressful for the declining numbers of GP obstetricians and is supported by obstetrical nurses. Fetal and maternal outcome appeared to be relatively unchanged, as would be expected in the early phase of a new program and with little change in participating personnel.

Hypothèse : Le nombre de médecins de famille ruraux pratiquant l'obstétrique continuera de diminuer à moins que l'on mette au point de nouveaux systèmes pour dispenser des services d'obstétrique viables. On indique qu'un système de pratique de groupe à périodes de garde partagées permettrait de maintenir ce service dans les hôpitaux ruraux et améliorerait le style de vie des médecins ruraux. Il serait en outre possible d'apporter ce changement tout en maintenant, voire en améliorant, la satisfaction des patientes et les résultats obstétriques.

Objectif : Analyser la satisfaction à l'égard des soins obstétriques dans un groupe d'omnipraticiens (OP) obstétriciens partageant des périodes de garde en milieu rural.

Concept : On décrit un groupe de six médecins de famille qui dispensent des soins obstétriques à des patientes qui leur sont référées dans une communauté rurale de 7000 personnes. Pour évaluer la satisfaction de toutes les parties, on a réuni des données au moyen de sondages effectués auprès de patientes, d'OP obstétriciens et d'infirmières pendant les six premiers mois de la pratique de groupe à périodes de garde partagées. On a évalué aussi les résultats pour le fœtus et pour la mère pendant les six mois qui ont précédé l'ouverture de la clinique et les six mois qui ont suivi.

Résultats : L'acceptation par les patientes a été remarquable, car 100 % des répondantes ont évalué entre quatre et cinq, sur une échelle de Likert de cinq points, leur satisfaction à l'égard du médecin accoucheur. Lorsqu'on leur a demandé si elles recommanderaient la clinique à une amie, 94 % lui ont accordé une note variant entre quatre et cinq sur une échelle de Likert de cinq points. Les médecins ont signalé que la pratique de groupe était moins perturbatrice, moins stressante et plus propice aux congés. Les infirmières ont apprécié le rôle plus important qu'elles ont joué dans les soins aux patientes et la préparation de l'accouchement. Les résultats pour le fœtus et la mère ont présenté peu de changements évidents.

Conclusions : La pratique rurale de groupe rurale en obstétrique est très acceptée par les patientes. Elle semble moins stressante pour les OP obstétriciens, dont le nombre diminue, et les infirmières en obstétrique l'appuient. Les résultats pour le fœtus et la mère semblent relativement inchangés, comme on s'y attendrait au début d'un nouveau programme et vu que le personnel participant a peu changé.

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"Family physicians who practise obstetrics are becoming an endangered species." — Klein et al, 1 October 1984

"Wherever feasible, women should give birth in their own community within the supportive circle of family and friends." — Joint Working Group of the SRPC, the CFPC Committee on Maternity

Introduction

Over the past 20 years there has been a well documented decline in the provision of rural obstetrical services.^{2,3} Most rural deliveries are attended by family physicians (FPs) or general practitioners (GPs), rather than obstetricians.⁴ Both the percentage of rural physicians who provide intra-partum obstetric service, and the number of rural hospitals that provide routine intra-partum service has declined, making access to intra-partum care for rural women and their families increasingly difficult. In Ontario, 11 of 35 rural hospitals stopped providing elective obstetrical service between 1988 and 1995.⁵ In the Grey and Bruce counties in southwestern Ontario, elective obstetrical services were provided by only 8 of 12 rural hospitals in 1996, and 3 more had stopped as of October 1999.

The midwestern Ontario town of Hanover is a good example of the decline in obstetrical services in rural areas. In the early to mid 1990s, all FPs in Hanover and neighbouring Chesley provided intra-partum obstetrical services to their own low-risk patients. Physicians practising in Chesley delivered babies at either the Hanover and District Hospital or the County of Bruce General Hospital in Walkerton. Physicians practising in Hanover delivered at the Hanover hospital. By January 2000, 6 of these 14 physicians had stopped providing intra-partum obstetric care. Two more were intending to stop intra-partum obstetrics by the end of 2000.

This example of the loss of obstetrical services in rural areas is likely to have an impact on patient care and outcomes. Hospitals where cesarean sections are done regularly even though pediatric and obstetric specialists are not on staff produce the best neonatal outcomes for low-risk deliveries available in Canada.^{6,7} Additionally, high outflow communities produce poorer obstetrical outcomes.⁸

Various forms of family practice group obstetrical care have been implemented successfully in a number of urban settings, including Calgary, Alta.,⁹ Brampton, Ont.,¹⁰ Port Moody, BC,¹¹ and at least 1 rural setting.¹² Patients report a high level of satisfaction with this mode of care delivery.¹⁰ It was believed that a group model of care delivery would have a number of benefits. It would decrease on-call demands on physicians, increase a sense of community support among GPs, stabilize the number of local deliveries and, ultimately, recoup some of the delivery transfers.

This paper examines a shared-call group obstetrical care model as developed in 1 rural medical community in southwestern Ontario to address the problem of declining obstetrical services in rural Canada.

Methods

Hanover is a town of 7000 with a catchment area of 17 500. In 1999 there was a full-time complement of 9 FPs and 1 general surgeon. Five family doctors from Hanover and one from the town of Chesley (20 km to the north) formed an obstetrical group to provide care to the region. Cesarean sections are performed by one local general surgeon or, from time to time, a neighbouring general surgeon or GP surgeon. Hanover has 2 GP anaesthetists, therefore most of the time cesarean sections are available. Vaginal births after cesarean (VBACs) are allowed only if a surgeon is immediately available. High-risk deliveries are referred to a secondary referral centre 80 km to the north or to a tertiary level referral centre 200 km to the south. Hanover is considered rural and underserved. During the year ending Mar. 31, 2000, 101 babies were delivered in Hanover. Hanover is a teaching centre for rural medicine; it receives medical students, family medicine residents and other medical learners from several academic centres.

Hanover's group model hinges on physicians who take turns covering obstetrical call for a period of a week. During that time, they are on call for deliveries and for any other issues that arise when obstetrical patients present to the Hanover hospital. Once the baby has been delivered, care of the mother and child is transferred to the mother's FP, or postpartum and newborn care may be delivered by the doctor on call for obstetrics, as agreed to by the physicians. FPs may remain on call for their own patients if they so wish, but are not obliged to do so — the system is intended to provide "guilt-free signout." Patients with no family doctor are accepted for prenatal care, and efforts are made to help them find a family doctor in the appropriate community.

The second component of this care delivery model is an ante-partum clinic, which runs 1 afternoon a week at the hospital, on the obstetrical unit. Patients are referred into clinic by 20 weeks gestation if their FP does not provide intra-partum obstetrical care, or by 36 weeks if their FP is a member of the obstetrical group. When referrals into the clinic are made, physicians are asked to send all prenatal documentation. This documentation is then also available on the obstetrical unit at time of delivery. Group physicians start their week on call by conducting the clinic, and thus patients should have the opportunity to meet the delivering doctor prior to presenting in labour. The Hanover hospital supported the clinic by providing space, equipment, and a nurse and a volunteer to staff the clinic for 1 afternoon a week. The obstetrical nurses also book clinic appointments.

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Satisfaction with model

Patients, GP obstetricians and obstetrical nurses were distributed questionnaires and asked to evaluate the new model of care from its inception in February 2000 to July 2000, using a 5-point Likert scale. Fetal and maternal outcomes were reviewed for the 6 months prior to and the first 6 months of the service.

Patients

During the first 6 months of operation of the group practice, questionnaires were distributed to all postpartum women prior to discharge. Questionnaires were completed anonymously. Patients were asked to rate their satisfaction with their attending physician and if they would recommend the clinic to a friend. There was an open-ended "comments" section. Data collected included complications arising during the pregnancy or delivery.

Physicians

The 6 participating physicians were surveyed at the beginning of the clinic's operation and again 6 months later. They assessed their satisfaction with respect to time off, stress, remuneration and the disruption of their practice.

Nurses

Obstetrical nurses were surveyed at the end of 6 months of operation of the clinic. They commented on their satisfaction with both the previous solo and present group physician practice. Their questionnaire also included an open-ended "comments" section.

Fetal and maternal outcome

Fetal and maternal outcome was evaluated for the 6 months prior to the commencement and for the first 6 months of clinic operation. All charts were reviewed for intra-partum transfers, cesarean sections, VBACs, repeat cesarean sections, infants with low Apgar scores, neonatal transfers, use of a vacuum extractor or forceps, and premature deliveries.

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Results

Demographics

The first 6 months of group practice saw 57 deliveries and 3 intra-partum transfers. This time frame included the period when the neighbouring town of Walkerton was involved in the well known E. coli water contamination crisis. During the acute phase of this crisis the Hanover obstetrical group physicians teamed up with the Walkerton medical staff to do all regional

deliveries in Hanover. Patients who would have delivered in Walkerton in the normal course of events are excluded from the database.

Patient surveys

Thirty-five of 57 patients responded to the questionnaire, for a response rate of 61%. Their satisfaction with physician care is shown in [Figure 1](#) and [Figure 2](#).

Patients indicated a high level of satisfaction not only with their own care but also with their confidence in recommending this system of care to their friends. They were generous in writing about their experiences and presented a surprisingly high level of satisfaction with and appreciation of those providing their obstetrical care.

Generally, patients felt physicians were knowledgeable about their history and helpful with advice. They felt the clinic was well organized and flowed well. They appreciated the opportunity to meet the nurses and physicians before delivery, and this seemed to allay their anxieties about being delivered by a physician other than their family doctor. ("One concern I had about the clinic was the possibility of being delivered by someone other than my own doctor. ... Once the clinic began, my worries were put to rest. I felt that I was in good hands no matter who I saw.")

Patient concerns included the logistics of conducting an outpatient clinic on the obstetric labour ward and the fact that this might be disconcerting for clinic patients and embarrassing for patients in labour. One patient stated she might have preferred being delivered by a female physician; the system does not offer this option. Finally, it was acknowledged that, in a perfect world, the patient's own family doctor would attend at her delivery.

Physician surveys

The response rate was 100%. Four major areas were surveyed: physician satisfaction with time off, stress, remuneration and disruption of practice. All are compared between solo and group obstetrical practice. Results are presented in [Figure 3](#), [Figure 4](#), [Figure 5](#), and [Figure 6](#).

There is a definite trend toward increased satisfaction in group practice, time off is improved, and with greater organization comes a decrease in stress levels. This reflects a general confidence in their peers amongst medical staff and a sense of support for each other. The obstetrical group practice is less disruptive to general medical practice overall. However, discontent with remuneration remains.

Physicians' reasons for participating in the obstetrical group included enhanced coverage for time off and the belief that this approach was likely to preserve intra-partum obstetrical care in the community.

Concerns were expressed about the medicolegal aspects of group practice; this concern was sufficient to dissuade one physician from continuing the practice of obstetrics. There was also the

expected concern about loss of continuity of care for patients.

Nurse surveys

Nurses' comments were mostly positive [Figure 7](#). They covered 6 issues.

- Physician availability and coverage: The nurses knew better who to call, although there was some initial confusion about whether to contact the FP or the GP obstetrician on call. There were some occasions when no physician was immediately available, but these times were fewer than before. It was noted that when the GP obstetrician is also on call for the emergency department (ED) this can cause problems, and it was suggested a second physician be called to cover ED during deliveries.
- Involvement in prenatal care: Nurses appreciated the opportunity to be involved in prenatal care. The opportunity for ante-partum contact enabled them to build earlier rapport with patients and to be more aware of their concerns and issues.
- Physician–patient relationships: Although the ideal situation is for patients to be delivered by their own family doctors, it was acknowledged that this is no longer feasible. Nurses felt that the prenatal clinic helped patients get to know the delivering physicians and reduced the number of occasions in which patients are delivered by a "covering doctor" they had not met. In general, their impression was that patients were happy with the group practice model.
- Preservation of services: Nurses were supportive of the group obstetrical practice as a way to preserve obstetrical services in the community.
- Paperwork: The extra paperwork involved in receiving and keeping ante-partum charts complete and in order was seen as something of a burden.
- Physical space: The space in which the clinic operates was felt to be suboptimal, and nurses were concerned with trying to meet dual responsibilities for ante-partum clinic patients and day surgery patients recently moved into one end of the obstetrical unit space.

Fetal and maternal outcome

Fetal and maternal outcomes are summarized in [Table 1](#). There is little obvious change in fetal and maternal outcomes to date. This is to be expected, with no change in obstetrical personnel. An interesting side effect is an increased interest in reducing our cesarean section rate. Plans are underway to develop better protocols for induction of labour, perhaps coupled with more effective pain relief models (i.e., in-house epidurals).

Overall advantages and disadvantages

The Hanover group practice highlighted a number of overall advantages and disadvantages to group obstetrical practice. These are illustrated in [Table 2](#).

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Discussion

Attempts to determine patient satisfaction with obstetrical care have been fraught with difficulty.^{13,14} In our study the questions were open-ended and patient anonymity was maintained, therefore allowing for negative comments to surface.

Consumer satisfaction may be the result of clinic design. The shared-call group system increased contact between nurses and patients and decreased the chance of a patient meeting the attending physician for the first time at delivery, thus addressing part of the continuity-of-care problem. It may be perceived as a positive effect on the part of the local caregivers to maintain and enhance a service deemed valuable by pregnant women. Certainly it has generated more discussion around obstetrical care in our community. All of these areas have been previously shown to have a positive effect on patient satisfaction.^{13,14}

Overall, physicians found the group practice to be less disruptive, less stressful with better time off, and more supportive for new physicians. Nurses preferred the group practice, had greater involvement with patients and therefore were better able to predict their needs. They also found that the doctors were more predictable. Patients were generally pleased. They liked getting to know the physicians and nurses and appreciated the work involved in maintaining an obstetrical program in their community.

Fetal and maternal outcomes appeared to be relatively unchanged as would be expected in the early phase of a new program and with little change in participating personnel. Our cesarean section rate remained stable, a little under the regional average. With respect to other measurable outcomes there seems little change, taking into account the small number of patients.

It is acknowledged that one of the weaknesses of studying populations in rural communities is the inherently small sample sizes. In addition, the short time span of the study allows us to comment on trends only. However, this is balanced by the expected high response rates by the providers, which is likely the result of their feeling of "ownership" of this model of care and by their interest in its outcome. The Walkerton water contamination crisis, although adding somewhat to our workload during the time of the survey, also proved an excellent opportunity to show how 2 small neighbouring communities can come to each other's aid in a time of need. It is our opinion that it did not adversely affect any of the study parameters.

How does our study compare with previous studies? Shapiro,¹⁰ looking at an urban model of shared deliveries among GP obstetricians, showed an 88% satisfaction with delivery care and 79% of women delivered willing to choose such a system again. Our study would compare favourably in this rural setting. Osmun and colleagues,¹² reporting on a group obstetrical practice in a rural setting, showed initial resistance by patients to shared obstetrical care. This has not been

our experience.

Some additional points are worth noting. With respect to remuneration, the system has the potential to be revenue neutral for participating physicians because those who hitherto had a large obstetrical practice still have the opportunity to attend their patient's delivery even if they are not the physician on call. However, there is a generalized discontent when it comes to remuneration. There certainly is little financial incentive to provide obstetrical services. Group practice in rural communities needs better funding, including an on-call stipend for a group style of service provision.

For the new doctors in town there was an unexpected benefit: the clinic established a routine and a review process that was encouraging and supportive. It allowed them to practise intra-partum obstetrics even though they may not have had a significant patient load to contribute to the group. Regular meetings were established to develop protocols and guidelines; these were well attended by nursing and medical staff alike and thus created a supportive environment for new staff.

Not surprisingly, group practice stimulated meetings to discuss protocols and methods of practice. It is hoped that by developing protocols (e.g., for induction of labour) using best evidence and shared expertise, improvements to fetal and maternal outcome can be expected in the future.

Our study indicates that rural group practice in obstetrics has a high degree of patient acceptance. It appears to be less stressful for the declining numbers of GP obstetricians and is supported by obstetrical nurses.

Neal C. Stretch, MD, CCFP Rural Family Physician, Hanover, Ont. Assistant Professor, Faculty of Medicine, Department of Family Medicine, University of Ottawa, Ottawa, Ont.; Caroline A. Knight, MD, CCFP Rural Family Physician, Chesley, Ont.

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Correspondence to: Dr. Neal Stretch, 118 – 7th Ave., Hanover ON N4N 2G9

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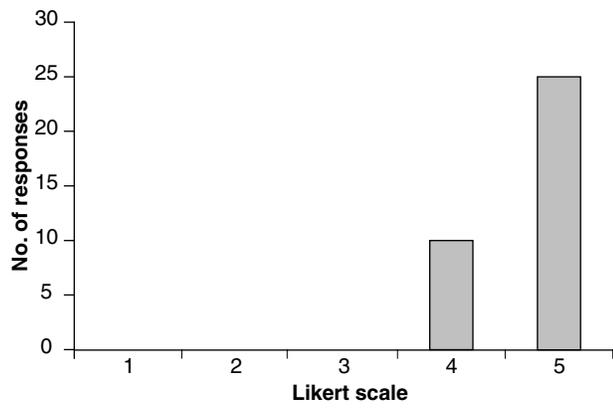


Fig. 1. Patients' satisfaction levels with the care provided by the physician(s) during delivery. Likert scale: 1 = least satisfied: 5 = most satisfied.

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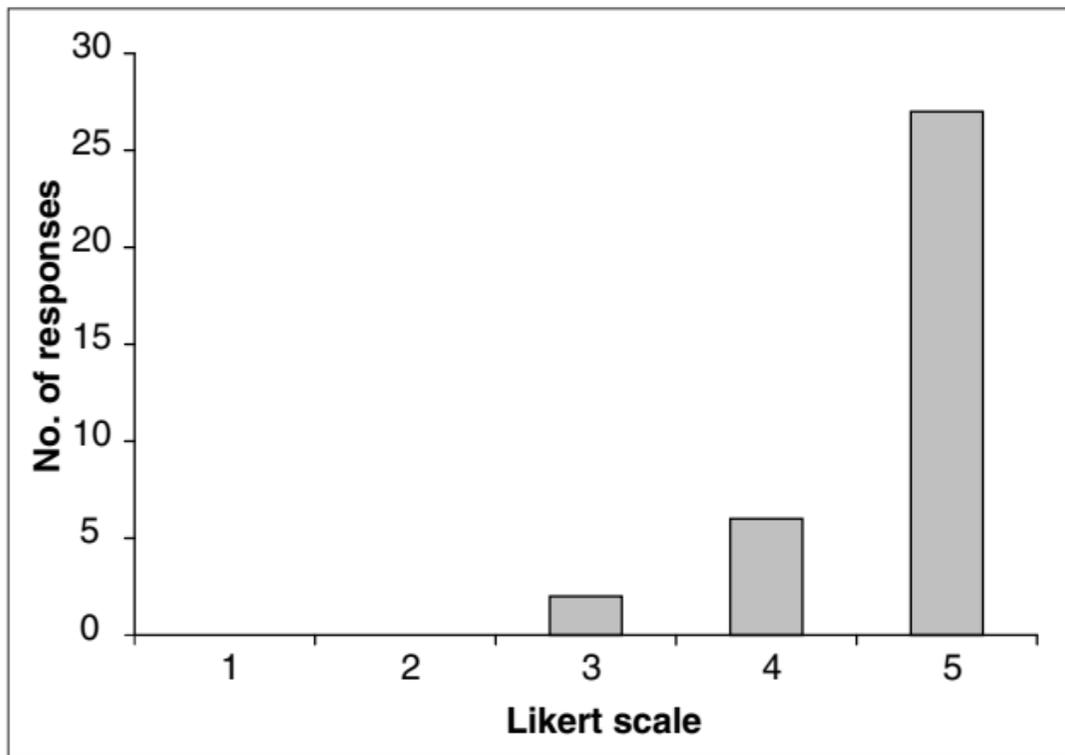


Fig. 2. How likely patients would be to recommend the group practice to a friend. Likert scale: 1 = not likely; 5 = very likely.

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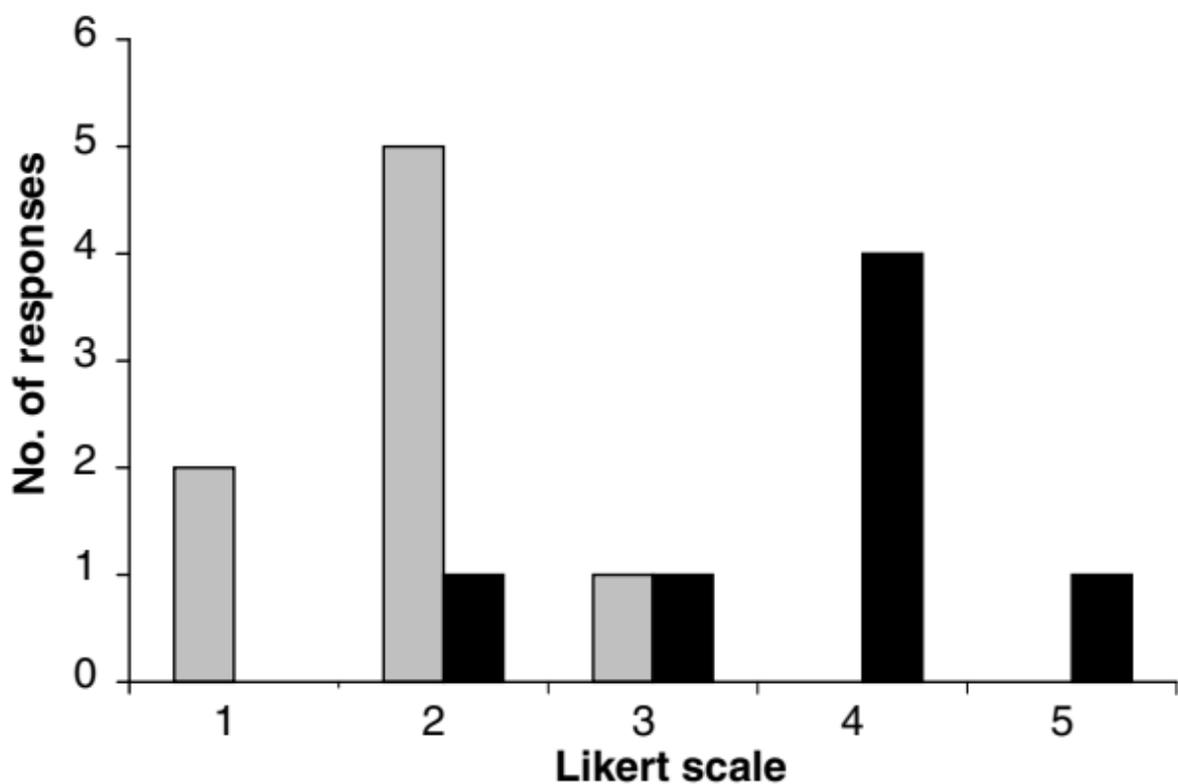


Fig. 3. Physicians' satisfaction with their amount of time off in their solo practice [grey bars] v. while in the group practice [black bars].

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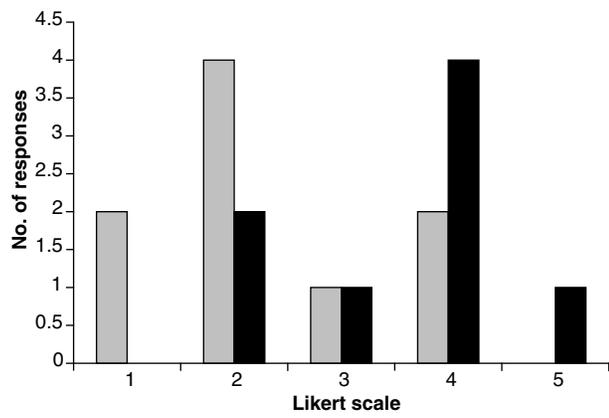


Fig. 4. Physicians' satisfaction with the level of stress in their solo practice [grey bars] v. while in group practice [black bars].

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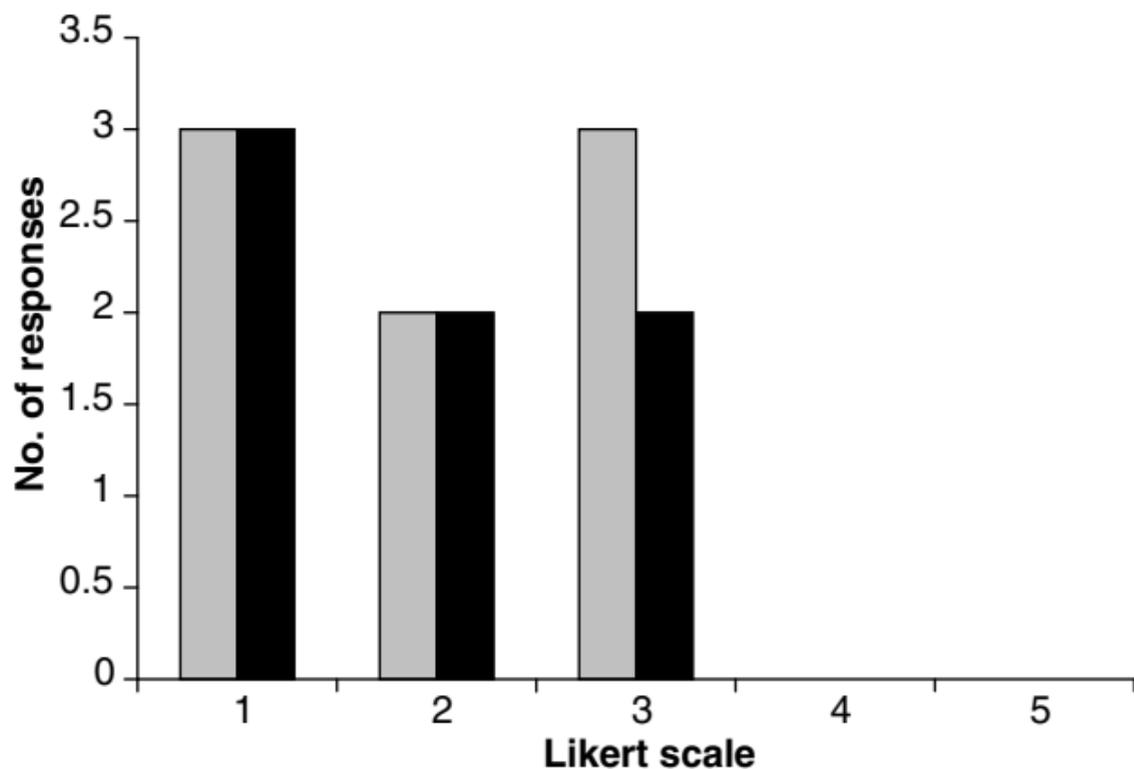


Fig. 5. Physicians' satisfaction with remuneration while in solo practice [grey bars] v. while in group practice [black bars].

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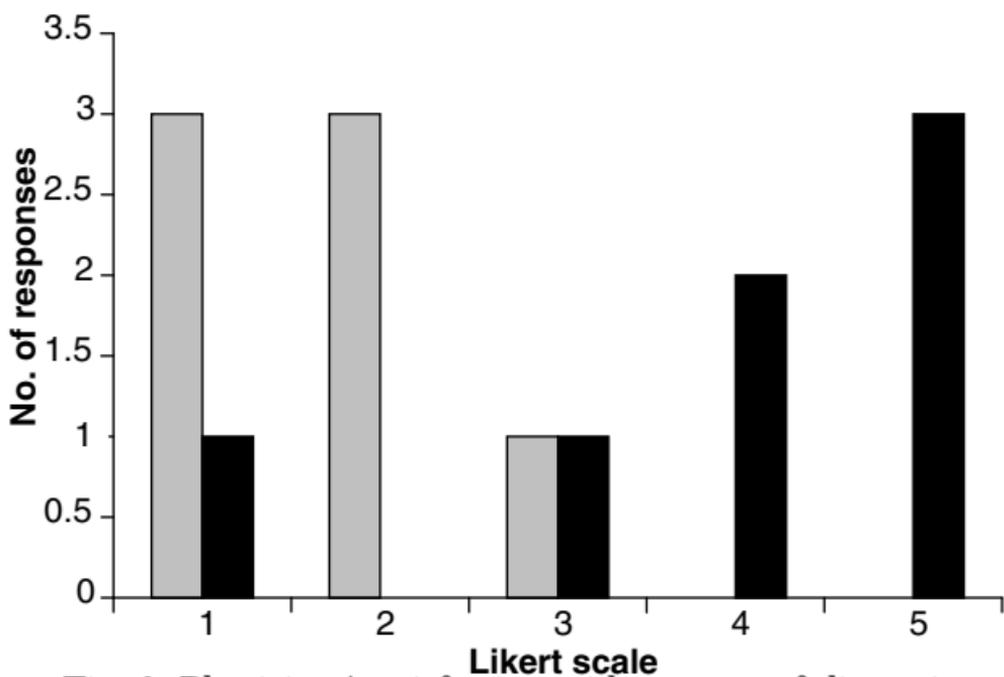


Fig. 6. Physicians' satisfaction with amount of disruption to their practice while in solo practice [grey bars] v. while in group practice [black bars].

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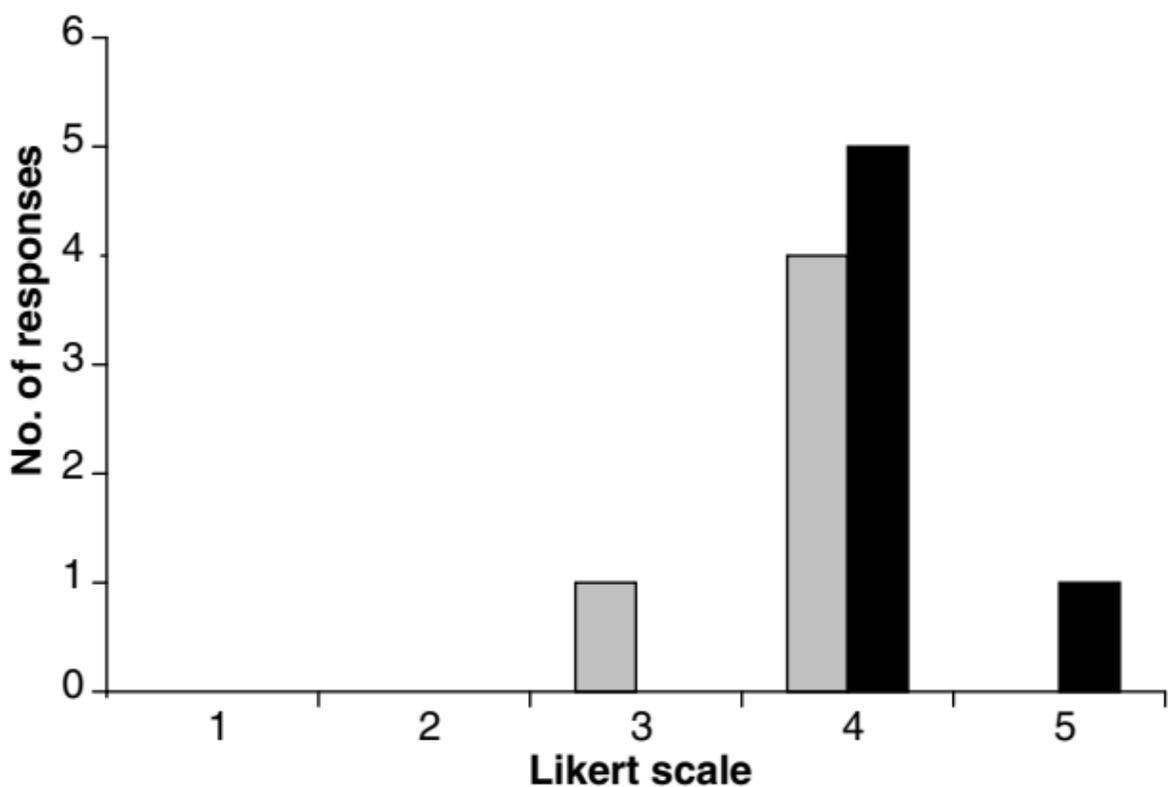


Fig. 7. Nurses' satisfaction while working in a solo practice [grey bars] v. working in the group practice [black bars].

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Table 1. Comparison of fetal and maternal outcomes in the 6-month period preceding start-up of obstetrical group practice and during the first 6 months of operation of the group practice

	Six months preceding start-up, no. (and %) of patients <i>n</i> = 47	First 6 months of group practice, no. (and %) of patients <i>n</i> = 57
Intrapartum transfers	4 (8.5)	3 (5.3)
Cesarean sections	12 (26.0)	9 (16.0)
VBACs	3 (6.4)	2 (3.5)
Repeat cesarean sections	6 (13.0)	4 (7.0)
Infants with low Apgar score (< 7 at 1 min)	3 (6.4)	6 (11.0)
Vacuum delivery	2 (4.3)	3 (5.3)
Outlet forceps delivery	1 (2.0)	1 (2.0)
Premature delivery	0	1 (2.0)

VBAC = vaginal birth after cesarean

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Table 2. Overall advantages and disadvantages to group obstetrical practice

Advantages

- A tenable lifestyle for physicians involved in the provision of intra-partum care. Under the old system, physicians could be on call for up to 5 weeks for each patient, and signing out is a matter of trading and tallying favours. It is hoped that enhanced lifestyles for physicians will translate into stable services for patients.
- Patients have the opportunity to meet all physicians who may deliver them, and physicians avoid meeting patients for the first time at delivery.
- Availability of prenatal charts at the hospital should solve the problem of records inadvertently not being forwarded to the obstetrical unit prior to delivery.
- A potential for enhanced group CME and development of common approaches to obstetrical management issues.
- Obviating the practice of inducing patients for reasons of non-availability of physician coverage.
- Greater involvement of hospital obstetrical nurses in the provision of ante-partum care.
- Incorporation of physicians practising outside a town into the equitable distribution of service provision among group members.
- A concentrated teaching/learning experience in rural obstetrics for family medicine residents, medical students and other learners.

Disadvantages

- Loss of patient's ability to choose the delivering physician and loss of continuity of care.
- The necessity of having a second call schedule for physicians who are also on call for the emergency department. Although, some physicians may choose to schedule obstetric call to coincide with their emergency department call shifts.
- The system does not provide much relief for physicians who have advanced skills (e.g., forceps delivery, GP anesthesia). However, the system may promote the acquisition of some of these skills by other group members.
- For physicians, loss of continuity of care and relationship with one's own patients.
- Potential for a lowered income if there are few or no deliveries during the week a physician is on call. There is currently no payment for obstetrical call coverage.
- A busy week on obstetrical call can wreak havoc in the on-call physician's office practice, but this is at least a phenomenon of "predictable chaos."

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The patient with Antisocial Personality Disorder: practical tips for the rural physician

Gordon Brock, MD, CCFP

Alan Buchanan, MD, FRCP

CJRM 2002;7(3):194-7

Antisocial Personality Disorder is described, with practical office and Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnostic criteria, the differential diagnosis and recent theories as to the cause. Some rural-specific tips for managing patients with this disorder in the family practice setting are provided, as is a discussion of how and when to terminate the therapeutic relationship.

Cet article décrit le trouble de la personnalité antisociale et présente des critères pratiques de diagnostic au cabinet et à l'aide du DSM-IV, le diagnostic différentiel et les théories récentes sur la cause. On offre quelques conseils particuliers au milieu rural pour la prise en charge en médecine familiale des patients atteints de ce trouble et l'on indique comment et quand mettre fin à la relation thérapeutique.

The stereotype of a patient with Antisocial Personality Disorder is that of the tattooed, tough-looking criminal-type biker but, depending on the person's intelligence, social class and other skills, he or she may be charming, well dressed and a good talker. Doubtless, many con men and "scammers" are people with Antisocial Personality Disorder.

General description

The patient with Antisocial Personality Disorder has no conscience, or lacks "super-ego development." He (as explained below, most antisocial personalities are males) believes the rules of civilized society do not apply to him. He will get what he wants, when he wants, however he wants. He'll get it by lying, stealing and cheating — and in extreme cases even by killing — and from everyone, including his physicians.

These patients are often stressful for physicians to care for, perhaps more so in a rural area, where there is less anonymity. You may be aware of this person's reputation, and he may know where you live.

We present the basic features of a patient with Antisocial Personality Disorder, review the diagnosis and differential diagnosis and offer some rural-specific practical tips for management.

Incidence

Antisocial Personality Disorder occurs in 3% of men and 1% of women.^{1,2} Synonyms for the disorder include "psychopath" and "sociopath."

Cause

There appears to be a strong genetic component associated with the disorder. In twin and adoption studies, often the biologic father is either a criminal or an alcoholic. These facts have a far greater influence on whether a child will grow up to become antisocial than does the influence of an adoptive father.³

Recent research has demonstrated, through the use of MRI in antisocial men with no previous history of brain trauma, the first evidence of a structural brain lesion in patients with Antisocial Personality Disorder. An 11% reduction in prefrontal gray matter was associated with reduced autonomic activity during a fear-provoking stressor. This structural deficit may underlie the patient's lack of conscience, poor fear conditioning, inability to reason in risky situations and the reckless, irresponsible behaviour described in the criteria for patients with Antisocial Personality Disorder (see [below](#)).⁴

The interview

Depending on their education, ability to articulate, and social skills, these patients may present their problems to you as a litany of misfortunes — everything is someone else's fault: their spouse, boss, authorities. They tell whatever story they think you will believe; they are never to blame for anything that has befallen them. Even when they're caught "red-handed" they will be remarkably calm and nonchalant. They can "talk their way out of anything," and some can act very nicely at times. But this is a sham and, often, it just resembles bad acting. Typically, patients with Antisocial Personality Disorder love to regale physicians with tales of their "smarts" (as they see it) and will try to impress by using medical jargon they have picked up over the years.

The diagnosis

The disorder begins in childhood and pervades all spheres of the patient's life — family, job and

social milieu. This aspect distinguishes these patients from the run-of-the-mill criminal or gang member who steals for monetary gain and whose behaviour outside the crime sphere may be normal. Look for the following behaviours² (see also [Appendix 15](#)).

- Difficulty, since adolescence, in following the rules of society. This pervades all spheres of the person's life.
- Schoolyard fights, running away from home, skipping or being suspended from school.
- Adolescent petty crimes, early sex.
- Inability to hold down a job; although, those from wealthier families, with supportive parents or good intelligence sometimes end up in managerial positions (the so-called "boss from hell").
- General recklessness, driving while impaired, nonpayment of debts.
- Inability to maintain a long-term relationship with a spouse (usually less than a year).
- Attention Deficit Disorder or substance abuse —associated disorders. Often there are histrionic and borderline traits.
- Arrests for behaviours such as assault and theft.

Pervading all this is a total lack of remorse for anything and, frequently, a lack of any feelings. The disorder is said to peak in the late teens and early adulthood and then diminish after age 40.^{1,3}

Differential diagnosis

As is the case for all personality disorders in family practice, do not over-diagnose. The disorder must have begun in adolescence and must pervade all spheres of the patient's life: his family, job and social milieu.

Do not presume that because a patient has committed criminal acts he or she has Antisocial Personality Disorder. Most criminals are not antisocial personalities, and many people with Antisocial Personality Disorder do not have criminal records. Antisocial behaviour that occurs during schizophrenic or manic episodes is excluded. Substance-Related Disorders or alcohol abuse and Antisocial Personality Disorder may coexist as separate entities (and should be listed as such under Axis I),⁶ but for the diagnosis of Antisocial Personality Disorder to be made, it must have begun in childhood and it will continue even after the Substance Disorder or alcohol abuse ceases.

Dealing with patients with Antisocial Personality Disorder^{7,8}

There is often an aura of romance and mystique surrounding violent people. Perhaps this is because they allow us to "project" our forbidden impulses. They do the things some people only dream of doing. For example, you might wish to punch your boss, that nasty neighbour, or the person who insults you. You may find yourself either mysteriously attracted to or, conversely,

totally repelled by this patient. As when treating patients with other personality disorders, it helps to consider your own feelings.

1. Keep your distance, literally and figuratively.
2. Never meet with these patients outside regular office hours or in another location.
3. Patients with Antisocial Personality Disorder like to brag. To help establish a rapport, you could use statements such as "Tell me about yourself" or "Everyone says you're a good man to have around in a fight" or "Nobody ever messes with you, I'm sure" or "You seem to be pretty smart. You seem to be able to get away with murder. How do you do it?" Remain as neutral as possible and do not voice approval of their actions.
4. Set limits early in your relationship: you will not tolerate threats. But don't fight back — these patients have a lot of experience with people who fight back. Just wordlessly get up and leave or, if in your own office, politely ask him or her to leave.
5. Establish a security system such as a coded message to your staff to call the police. If you are going to refuse the patient something, such as narcotics, have a second person in the room if possible — for security and as a witness.
6. Be extremely cautious when prescribing benzodiazepines or narcotics. These patients have a high risk of substance abuse. Also, they may sell or "redirect" these drugs.
7. Don't leave the patient alone in your office even for a second. Among other things, prescriptions might be stolen.
8. Remember that he or she has probably never had a trusting relationship with a parent or anyone else. You may be seen as an authority figure. It will take a lot of work to gain trust and form a therapeutic relationship in which you can solve any general medical problems.

Specific tips^{7,8}

1. Exploit your own advantages

Most patients with Antisocial Personality Disorder have no patience and are usually seeing you only because they want something — a prescription, a letter excusing them from an obligation, co-existent anxiety. If you get into a tight spot, stall for time, but carefully. Remember, he or she has no patience. Here are some stalling tactics.

"Percodan? I don't use it much. I don't know how to prescribe it. Let me read up about it. Come back later."

"I can't do that right now. Can you come back another time?" (Don't be too definite as to a time.)

"We're not allowed to prescribe narcotics in the emergency department of this hospital."

2. Do not expect too much

Routine referral to a psychiatrist is not indicated. Don't expect too much. Allowing them to escape the consequences of their acts will not help them — or you — in the long run, nor will a

punitive approach (chastising them). You may, however, be able to teach them some alternative ways to handle some of their day-to-day life problems, or treat any coexistent Axis I problems, such as depression or alcohol abuse.⁶

Self-help groups such as Alcoholics Anonymous are sometimes useful, although this type of therapy may be sabotaged by the patient's tendency toward self-importance and bragging.

3. Prepare a "contract"

These patients have a high "sense of entitlement."⁸ It might be wise to have a verbal or written contract with the patient, specifying what you will reasonably provide.

4. Drugs or psychotherapy

There is little, if any, place for psychiatric drugs or psychotherapy for patients with Antisocial Personality Disorder in the rural family practice setting.

5. Terminate the relationship

If threats continue, if the patient steals things from your office, or "redirects" drugs you prescribe, you are within your rights to terminate the relationship. This is always a difficult procedure, especially in the rural setting with the issues of decreased physician availability and the rural physician's need to take emergency call.

Send the patient a registered letter informing him or her of your intention, and keep a copy in the chart.⁹ Check with your college of physicians for the requirements for terminating a physician-patient relationship.⁹ The letter should be personalized. Clearly state that you are terminating care, and provide the reasons.

Allow the patient time to arrange alternative care, depending partly on the urgency and seriousness of comorbid conditions. Be reasonably helpful in arranging alternative care and in transferring records. Depending on availability of physicians regionally, you may have to inform the patient that you can only see him for emergencies when you are on ED duty. Inform your staff of the termination of care.

6. Support your staff

Be sure your staff understand your plan for dealing with these difficult, and sometimes scary, patients.

The female patient

As previously stated, Antisocial Personality Disorder is less common in women than in men.^{1,2} In the past, women with this disorder were believed to be not as violent as their male counterparts, although this may be changing. They follow, qualitatively at least, a similar pattern to the male, showing an inability to follow the conventions of society and to have meaningful

relationships in all spheres. Early and unprotected sexual activity is common.

Especially if you are a male physician, be careful. They may be charming, and dress and act seductively. It is wise to have a female attendant in the room when you examine a female patient with this disorder.

Conclusion

Patients with Antisocial Personality Disorder are often difficult and sometimes outright scary. We hope that this basic understanding of their psychodynamics and some simple, common sense behavioural tips will help rural physicians deal with these stressful patients.

Gordon Brock, MD, CCFP, Family Physician, Temiscaming, Que., Assistant Professor, Department of Family, Medicine, and Lecturer, Department of Anesthesia, McGill University, Montreal, Que.; Alan Buchanan, MD, FRCP, Clinical Professor, Department of Psychiatry, University of British, Columbia, Vancouver, BC, Vydas Gurekas, MD, CCFP, Family Physician, Temiscaming, Que., Lecturer, Department of Family Medicine, McGill University, Montreal, Que., and Director of Professional Services, CLSC Temiscaming, Temiscaming, Que.

Correspondence to: Dr. Gordon Brock, Centre de Santé, 180 Anvik, Temiscaming QC J0Z 3R0; geebee@neilnet.com

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Appendix 1. Diagnostic Criteria for 301.7 Antisocial Personality Disorder⁵

- A. There is a pervasive pattern of disregard for and violation of the rights of others occurring since age 15, as indicated by three (or more) of the following:
 - 1) failure to conform to social norms with respect to lawful behaviors as indicated by repeatedly performing acts that are grounds for arrest
 - 2) deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure
 - 3) impulsivity or failure to plan ahead
 - 4) irritability and aggressiveness, as indicated by repeated physical fights or assaults
 - 5) reckless disregard for safety of self or others
 - 6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations
 - 7) lack of remorse, as indicated by being indifferent, or rationalizing having hurt, mistreated, or stolen from another.
- B. The individual is at least 18 years.
- C. There is evidence of Conduct Disorder with onset before age 15 years.
- D. The occurrence of antisocial behavior is not exclusively during the course of Schizophrenia or a Manic Episode.

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Whistler Health Care Centre wrist fracture study

Bruce Mohr, BSc, MD, CCFP(EM)

CJRM 2002;7(3):199-204

Objective: Our goal was to determine the outcome of the management of displaced distal radius fractures (DDRFs) by primary care physicians working at the Whistler Health Care Centre (WHCC).

Methods: Patients presenting with DDRFs over a 4-month period were treated at the discretion of the attending physician but along generally accepted guidelines. Orthopedic or family physician follow-up was arranged or advised on an emergent, urgent or routine basis as indicated clinically and radiologically. Patients were contacted by telephone 3 months post-injury to determine their functional outcome and whether any unexpected intervention had been required.

Results: Seventy-three DDRFs in 72 patients were reduced primarily by intravenous (Bier) regional anesthesia and casting. Five patients (7%) required emergent orthopedic referral. Fracture reductions were performed on 27 (38%) and referred to orthopedics within 1 week because of potential instability. In 40 patients (56%) fracture reductions were felt to be stable, and routine follow-up with the physician of their choice was advised. Only 2 patients received unexpected surgery. Of those patients who were contacted by telephone at 3 months 92% felt they had a good-to-excellent functional and cosmetic result in terms of appearance, range of motion, pain, stiffness and strength. Six percent felt their outcome was moderate, and 1 patient described the result as poor.

Conclusions: This study provides evidence that primary care physicians working in a rural setting can achieve good outcomes in the management of DDRF.

Objectif : Déterminer le résultat de la prise en charge des fractures de la région distale du radius avec déplacement (FDRD) par des médecins de première ligne travaillant au Centre de soins de santé de Whistler.

Méthodes : Les patients qui se sont présentés avec une FDRD pendant une période de quatre

mois ont été traités à la discrétion du médecin traitant, mais conformément à des guides généralement reconnus. Le suivi par l'orthopédiste ou le médecin de famille a été arrangé ou conseillé pour une raison émergente, urgente ou routinière selon les symptômes cliniques et radiologiques. On a communiqué avec les patients par téléphone trois mois après le traumatisme pour déterminer leur résultat fonctionnel et si une intervention inattendue s'était imposée.

Résultats : On a réduit 73 FDRD chez 72 patients, principalement par pose d'un plâtre sous anesthésie régionale intraveineuse (Bier). Il a fallu référer cinq patients (7 %) à un orthopédiste en raison de symptômes émergents. On a réduit la fracture chez 27 des patients (38 %) qui ont été présentés à un orthopédiste dans la semaine suivante en raison d'une instabilité possible. Chez 40 des patients (56 %), on a considéré que la réduction de la fracture était stable et recommandé un suivi de routine par le médecin de leur choix. Seulement deux patients ont subi une intervention chirurgicale inattendue. Parmi les patients avec lesquels on a communiqué par téléphone à trois mois, 92 % étaient d'avis que leur résultat fonctionnel et esthétique variait de bon à excellent sur les plans de l'apparence, de l'amplitude du mouvement, de la douleur, de la raideur et de la force. Six pour cent étaient d'avis que leur résultat était moyen et un patient a qualifié le résultat de médiocre.

Conclusions : Cette étude démontre que les médecins de première ligne qui œuvrent en contexte rural peuvent obtenir de bons résultats dans la prise en charge de la FDRD.

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Introduction

Orthopedic injuries are common in primary and emergency care settings. In rural areas, management can be difficult because access to orthopedic referral is often limited. In general, orthopedic training for primary care, emergency and even general surgical practitioners is relatively lacking. Much of the wrist fracture literature is based on epidemiological studies, and in these studies most patients were female, incidence increased with age, and the mechanism of injury was a simple fall to the ground without high-energy trauma.¹ Many classification schemes exist to describe distal radius fractures,^{1,2} and increasingly operative fixation is viewed as the optimal treatment method for restoring anatomic congruity and hence optimal functional outcome,^{3,4} particularly in the young adult.⁵

Physicians working at the Whistler Health Care Centre (WHCC) have, of necessity, developed expertise in managing orthopedic injuries due to the numerous skiers, snowboarders and other sporting enthusiasts who visit Whistler every year. This study undertook to follow up patients with displaced distal radius fractures (DDRFs) presenting to the WHCC to determine their

outcome and appropriateness of referral.

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Setting

The WHCC is a diagnostic and treatment facility (D&T) in Whistler, BC, a well-known ski resort town of 9000 residents located 100 km north of Vancouver. The tourist population approaches 40 000 during peak season, and daily skier and snowboarder volumes on adjacent Blackcomb and Whistler mountains reach 25 000; 2.18 million visits were recorded during the 1999–2000 winter season. We treat a unique subset of the population that is young and participates in extreme sporting events that sometimes result in high-energy trauma. There were 23 000 outpatient emergency visits during the 1999–2000 year, with most of these being during the winter season. There are 8 family doctors in 3 separate practices in town. The D&T is staffed by 5 full-time emergency physicians and 4 part-time family physicians. Two of the emergency physicians are CCFP (EM)-certified, one is a CCFP, one is an FRCP (Pediatrics) and one is a GP. The family physicians working part time in the emergency department are CCFP- or GP-qualified.

It is important to note that, while the seasonal employee and tourist population is transient, the physician population is extremely stable. The same doctors who worked here 20 years ago are still here today and are supplemented by the gradual addition of medical manpower as patient volume has increased. The majority live and work in Whistler year round, which also facilitates disaster planning and soliciting extra help when mass casualty incidents arise.

The medical staff at the WHCC have developed expertise in managing a vast array of orthopedic injuries that are conveyed to them by ski patrol, ambulance and helicopter. Whistler has no hospital, no specialist availability except for elective consultations, and no surgical capability. The WHCC functions as a 15-bed emergency department complete with lab, diagnostic x-ray and ultrasound, nursing triage and reception. It is open from 0800 to 2200 hours, and a physician is on call after hours. Physician and nursing staff have become very proficient at employing procedural sedation and intravenous regional blocks to perform the primary orthopedic and plastics care. Twenty-five percent of patients seen live outside Canada, and many Canadian patients are far from home. Most of these patients receive definitive orthopedic care at the WHCC, but many receive emergency treatment and then are referred home for definitive orthopedic surgical care, depending on the clinical scenario (e.g., an injury with neurovascular compromise is referred emergently, whereas an unstable fracture dislocation would be reduced and referred urgently). Many patients requiring definitive surgical care would prefer to receive it at home because of cost considerations, familiarity with their surgeon, and follow-up

considerations, among other things. Therefore, we decided to follow patients with DDRF whom we treated over part of a typical winter season to determine if the treatment and referral instructions that we gave were appropriate to the severity of injury.

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Methods

Charts were collected prospectively from Dec. 1, 1999, to Mar. 31, 2000, by placing a chart copy of any patient with DDRF in a "study box" located at the physician/nursing station. Patients were only included in the study if the treating physician felt their DDRF met criteria for reduction of the fracture. Treatment of DDRF has been the topic for discussion at several continuing medical education rounds that are held regularly at the WHCC. Generally accepted guidelines, described succinctly by Thompson,⁶ are followed by physicians at the WHCC. Thompson's criteria for reduction were: > 5 mm radial shortening, > 0 degrees of dorsal angulation on the lateral view, > 11 degrees of palmar tilt, > 10 degrees loss of normal (19–29 degrees) radial inclination, and > 2 mm articular surface step deformity.

With such a small group of physicians caring for a relatively large and narrow spectrum of injury, homogeneity of treatment is facilitated. Anesthetic choice and splint or cast material was left to physician preference. Intravenous (IV) regional block (Bier) as described by Roberts⁷ was used in most cases, with hematoma block and procedural (conscious) sedation used in a few cases. A standard nursing assessment and vital signs form was used on each patient who required procedural sedation and IV regional block. There were no complications or cases of inadequate pain management in any of the 73 reductions. Padded plaster of Paris or fibreglass casts or splints were employed to hold the reduction, and casts were split post-procedure at the physician's discretion. Patients were instructed in cast care, their arms were placed in a high sling, and they were advised to follow up with an orthopedic surgeon where the fracture was felt to be potentially unstable, and with their physician of choice where the fracture was considered to be stable.

Emergent referral was arranged when fractures could not be reduced by closed means or where there were concerns about compartmental or neurovascular compromise. Potential instability was defined by generally accepted criteria, including degree of displacement, comminution, and intra-articular involvement.¹ Routine follow-up instructions consisted of weekly re-examination and x-ray for a minimum of 3 weeks from the time of reduction and casting for approximately 6 weeks. The author contacted patients by telephone at 3 months post-injury. The same questions were asked of all patients, including how they would describe their outcome, what and with whom

their actual follow-up was, what their treatment course consisted of, and whether there was surgical treatment required or anticipated.

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Results

The WHCC treated 72 patients with a total of 73 DDRFs (one female skier had bilateral displaced fractures requiring reduction). Ages ranged from 9 to 63 years, with the majority in their teens and twenties. There were 48 males and 24 females involved in 1 walking, 1 hockey, 61 snowboarding and 9 skiing injuries. Anesthetic choice was intravenous regional (Bier) block in 66, hematoma block in 3, and procedural (conscious) sedation in 3 patients. [Figure 1](#) shows how patients were referred for follow-up according to the severity of DDRF.

In 5 patients emergent referral to orthopedics was made for unstable fractures that could not be held reduced by closed methods or where there were concerns about neurovascular compromise. In 27 patients follow-up with orthopedics was advised within 7 days because, although good reductions were achieved, there was concern about potential instability. Of these, 20 (74%) continued conservative treatment. Of the remaining 7 patients, 3 (11%) required surgery and 4 were lost to telephone follow-up. [Figures 2 and 3](#) and [Figure 4](#) show x-ray pictures of DDRF in a 26-year-old snowboarder who was treated with closed reduction and referred for urgent orthopedic follow-up. He was treated "unexpectedly" by conservative means. During his telephone interview he stated his result was good with no problems with stiffness or pain and good strength.

The 3 patients requiring surgery consisted of 1 with external fixation at 3 days, 1 was initially managed conservatively at next-day follow-up but with operative reduction with internal fixation (ORIF) for a slip at 1 week, and 1 with conservative management at 5-day follow-up but with ORIF for a slip at 3 weeks. In 40 patients (56%) routine follow-up was advised because fracture reductions were felt to be stable. Of these, 28 (70%) continued with conservative management. One patient required unpredicted surgery for a dorsal slip at 2-week follow-up. Eleven patients (27%) could not be contacted. The only other patient considering unpredicted surgery was from the "urgent orthopedic referral" group with a possible cartilage problem after 8 weeks of conservative casting.

Chart review and telephone follow-up revealed that 46 (64%) patients received follow-up and ongoing care with orthopedic surgeons, 24 (33%) with GPs and 2 unknown. The 5 patients referred for emergent orthopedic surgery did receive surgery and were not part of the telephone

follow-up group.

Telephone follow-up at approximately 3 months post-injury was successful in 52 of 67 patients (78%). Subjective follow-up information could not be retrieved from 15 (21%) patients because of inaccurate or unlisted phone numbers and/or foreign language barriers; however, in 3 of these patients x-ray results obtained from 2 to 6 weeks follow-up showed anatomic reduction was maintained. Almost all patients had followed discharge instructions very well. Forty-eight (92%) reported a good-to-excellent functional and cosmetic result in terms of appearance, range of motion, pain, stiffness and strength. They were very pleased with the care they had received and with their outcome. Three (6%) patients felt they had a moderate outcome. One of them, who was in the "urgent orthopedic referral" group, failed to obtain physician follow-up until 5-weeks post-reduction, had a dorsal slip and felt the outcome may have been better if discharge instructions had been followed. The second patient took a bad fall at 2 weeks post-reduction (wearing a cast) and required re-reduction. This patient described "moderate stiffness" but was otherwise doing well. Only 1 patient reported her result as "poor." She was getting physiotherapy and considering surgery for "ulnar nerve compression." All reports received from patients were subjective and uncorroborated by objective evidence or professional opinion.

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Discussion

This study of DDRF treated over a 4-month period by primary care physicians at the WHCC suggests that treatment and referral are appropriate for the severity of the fracture and outcomes are generally good.

Most literature regarding distal radius fracture management is based on epidemiological studies involving older patients and low energy trauma.¹ Many are orthopedic studies that elucidate classification systems and operative technique.^{2,4,5} There is a paucity of literature describing management of DDRF in rural settings. An exception is Thompson's article in 1998, which was based on a review of DDRF treated at Sundre Hospital in Sundre, Alta., with recommendations for management and referral of DDRF.⁶

Most of the DDRFs that we see at the WHCC are the result of high-energy trauma in young, healthy people. Isani and Melone⁴ stated: "While the majority of unstable fractures can be successfully managed by closed methods, a substantial and increasing number require open treatment for restoration of articular congruity." At the WHCC surgical treatment is not an option, so closed reductions are performed on all patients with DDRF who present to us.

Orthopedic referral is then arranged or suggested based on the severity of fracture and potential for instability or neurovascular compromise. The present study was undertaken to find out if patients' outcomes were satisfactory and whether unexpected surgery was required.

Only 5 patients required emergent orthopedic referral. The majority of patients (55%) were able to have their fractures treated and received routine follow-up. The most surprising finding was that the majority of patients referred for urgent orthopedic follow-up, with potentially unstable fractures, continued conservative treatment and did not require re-reduction or surgery.

Most patients who were referred urgently for potentially unstable fractures were treated conservatively and had good outcomes. While reassuring, this does not change our criteria for urgent referral. It simply gives us confidence in attempting reductions of severe DDRF, referring for appropriate follow-up, and in realizing that our treatment may prove to be definitive.

Sixty-four percent of patients received orthopedic follow-up even when fractures were felt to be stable. This appeared to be due to self-referral patterns, especially in the United States.

The majority of patients were very satisfied with the care they received and with their functional outcome. Unexpected surgery was extremely rare (2 cases). The unexpected dorsal slip at 2 weeks was managed effectively because of the routine follow-up recommendations. The other patient was considering surgery for an ill-defined cartilage problem after 8 weeks of cast treatment.

The study has some limitations. There was potentially incomplete inclusion of all patients with DDRFs treated at WHCC during the study period because we relied on physicians and nurses to photocopy chart copies at the time of treatment and to put them in the study box. During busy shifts this may have been neglected. Telephone follow-up was incomplete (15 patients could not be contacted) and was short-term (3 months), which may not correlate with long-term function. Patients' statements about results and function were subjective and could not be corroborated by professional opinion or objective evidence. And finally, the study findings are specific to the physicians working at the WHCC during that time period and cannot be extrapolated beyond that. However, they do suggest that primary care physicians following generally accepted guidelines for treatment and referral can manage DDRFs effectively.

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Conclusion

Treatment of DDRF by primary care physicians at the WHCC resulted in good outcomes. Indeed, the majority of patients with potentially unstable fractures was managed conservatively and they did well. With appropriate guidelines for treatment and referral, displaced fractures of the distal radius can be managed safely by the primary care physician.

Bruce Mohr, BSc, MD, CCFP(EM), Dip. Sport Med., Chief of Staff, Whistler Health Care Centre, Whistler, BC

Competing interests: None declared.

Correspondence to: Dr. Bruce Mohr, Whistler Health Care Centre, 4380 Lorimer Rd., Whistler BC V0N 1B4; bmohr@whooshnet.com

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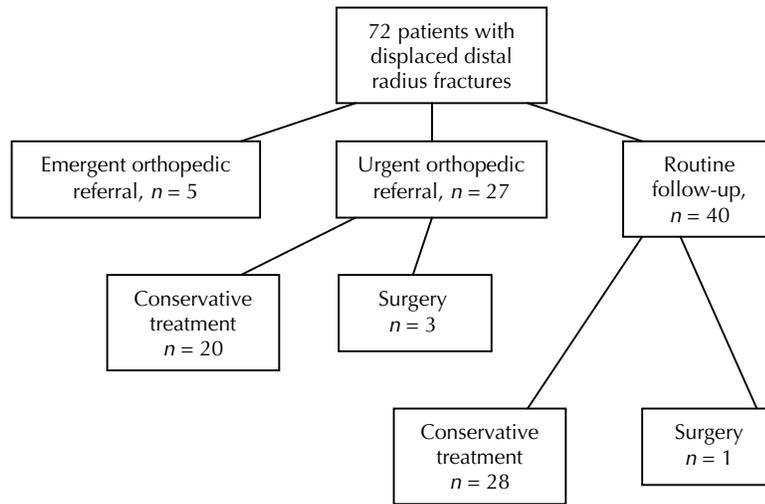


Fig.1. Referral pattern of 72 patients with displaced distal radius fractures (DDRF).

[\[Return to text\]](#)



Figs. 2 (L) and 3 (R). Pre-reduction lateral (L) and anterior-posterior (R) wrist x-rays of 26-year-old snowboarder

[\[Return to text\]](#)



Fig. 4. Post-reduction wrist x-rays of 26-year-old snowboarder. Left: lateral view; Right: anterior-posterior view. [\[Return to Text\]](#)

The occasional lumbar puncture

John Wootton, MD, CCFP, FCFP

CJRM 2002;7(3):207-10

Time passes, and indications for lumbar puncture (LP) come and go, but don't seem to completely disappear. Computed tomographic (CT) scanners (touted as rendering LP unnecessary in certain instances) are yet to be found in every rural hospital. Even if they were, they are not infallible, and we are left with the reality that to fully serve our patients we will, on occasion, need to perform an LP.

This procedure may fill us, no less than our patients, with apprehension. What exactly is happening at the end of that needle? The needle is so long, and seems to go in so far before hitting "paydirt"! All this causes physicians to shy away from a procedure that in reality is quite straightforward, and quite safe.

Indications

The indication most likely to be encountered by the rural physician is to exclude meningitis. This indication may occur in a variety of clinical contexts, including "fever of unknown origin" in a child, when symptoms and signs are suggestive of the diagnosis, or when the diagnosis is evident, but cerebrospinal fluid (CSF) is nonetheless required urgently for culture.

Less clear are the indications for LP in the context of headache to rule out a subarachnoid hemorrhage (SAH). A lively discussion of this issue can be followed in the cited references, 1–3 all turning on the sensitivity and specificity of modern CT scanning, the expertise of the radiologists interpreting the scans, and the corresponding risks of false-positive LPs as a result of bloody taps. The issue is, however, moot if you happen to be 500 km from the nearest scanner in the middle of a snowstorm on a cold Canadian February Friday night. One adage that might apply is: "If you think of it, do it." There is some wisdom here, and individual physicians will follow their logic tree to where it leads them. If it leads to a valid indication for an LP, these following images may be of assistance.

Contraindications

There are few absolute contraindications to LP, but one certainly is infection in the tissues, which will be traversed by the needle. This might lead to an iatrogenic meningitis. There are also reports of herniation following LP in people with intracranial abscesses or brain tumours, although the risk seems to be less when smaller needles are used.

Technique

1) Equipment

Equipment is straightforward and includes the following items (Fig. 1).

- sterile drapes
- manometer
- 3-way stopcock
- 3 to 4 test tubes
- spinal needle (disposable or stainless)
- syringe and local anesthetic.

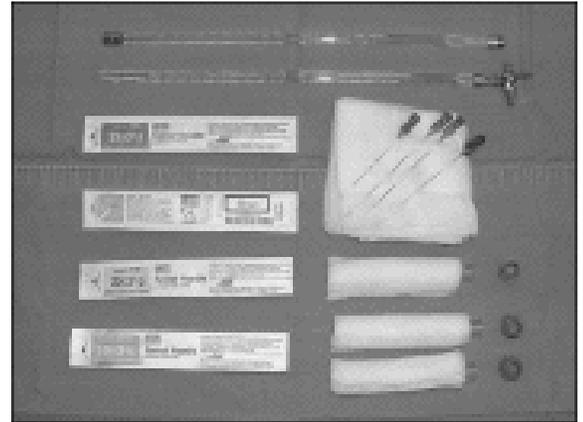


Fig. 1.

2) Position the patient and identify the landmarks

A common position places the patient on his or her side, curled into a fetal position (Fig. 2). This opens up the lumbar spaces. A line joining the iliac crests will intersect the lumbar spine (in adults) well below the level where the spinal cord turns into the filamentous cauda equina. One space above or below this spot can be an alternate site.



Fig. 2.

3) Choose the needle

Disposable needles of various sizes are available (Fig. 3). Twenty-five-gauge needles are less traumatic and are useful for procedures such as myelography, but they are more difficult for withdrawing samples of CSF or for measuring opening pressures. Eighteen-gauge needles are discouraged because they leave a relatively large hole in the dura and are associated with an increased incidence of headache following the spinal tap. Twenty-two-gauge needles are most commonly used. Disposable needles are

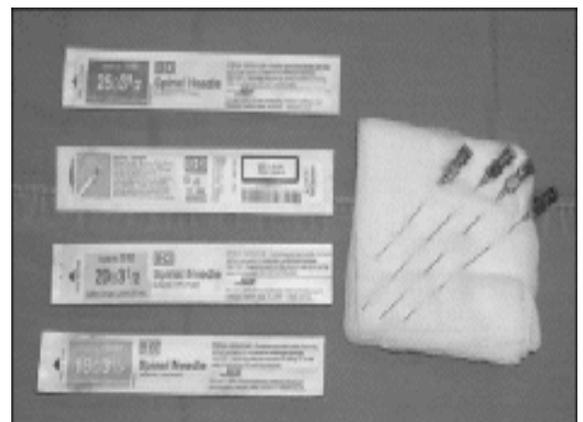


Fig. 3.

very sharp, and the "pop" as the needle goes through the dura may be more difficult to appreciate. Non-cutting needles (Sprotte® — not illustrated here) require special introducers and are more difficult to master.

4) The procedure

Prep and drape the skin in the usual fashion. It is appropriate to be even more fastidious than usual with this step to avoid contaminating the procedure. Infiltrate generously with local anesthetic. This may obscure some palpable landmarks of the space chosen, so it is helpful if you mark the spot before you prep the skin. Use your fingernail to imprint an "X" in the appropriate place. With the stylet inserted in place, advance the needle in the midline, at right angles to the back, aiming slightly cephalahad (Fig. 4).

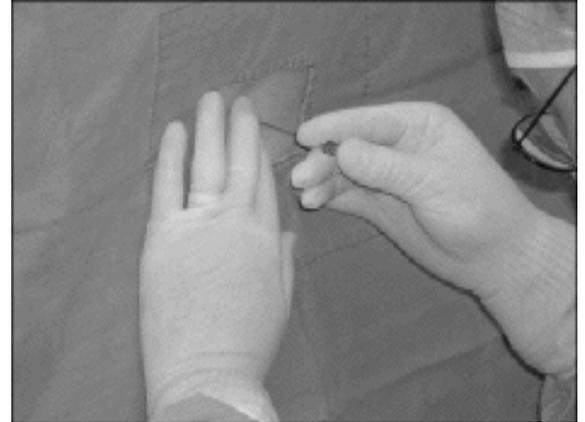


Fig. 4.

There is evidence that you should orient the plane of the bevel of the needle to be in the same direction as the longitudinal fibres of the dura to minimize the size of the dural defect that is created. In this illustration this would be accomplished by facing the bevel either up or down.

5) Check for CSF

As you advance, check frequently for CSF by withdrawing the stylet and watching for a drop of fluid to emerge from the needle (Fig. 5). You may feel a distinct "pop" as the needle and stylet go through the dura, and it is surprising (particularly in the obese) how far the needle goes in before you reach the spinal canal. Frequently, especially in older individuals, you will hit bone. If this happens, draw the needle back (or out) and try again, checking to make sure you are in the midline and still at right angles to the back. It helps to aim slightly more cephalahad in subsequent attempts, and to ask the patient to flex his or her back as much as they can. Children can be held in this position by an assistant.

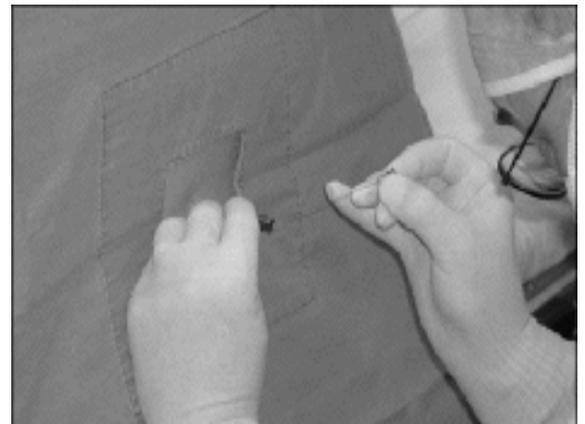


Fig. 5.

6) Measure opening pressure

As soon as CSF is encountered, insert the stopcock with the manometer attached (Fig 6). In

order to route the CSF up the tube, the moveable long arm of the stopcock needs to be pointed in the appropriate direction, long arm down to route the fluid up the manometer, and horizontal to route it out of the end of the needle. Placing the lever straight up will stop flow in both directions. You will be able to follow the rise of the fluid in the calibrated tube. Note the level at which it stops rising, and then prepare to collect the samples for analysis.



Fig. 6.

7) Collect the samples

Move the stopcock lever to the horizontal position (or remove it and the manometer from the needle entirely) and begin to collect the fluid that is dripping out of the needle (Fig. 7). Collect at least 10 drops into each of 3 to 4 sterile tubes, and have an assistant cap them and label them in the order in which they are collected. This will help determine if blood in the CSF is from a traumatic tap, an SAH or from some other pathology. Once sufficient CSF has been collected, re-insert the stylet and remove the needle.

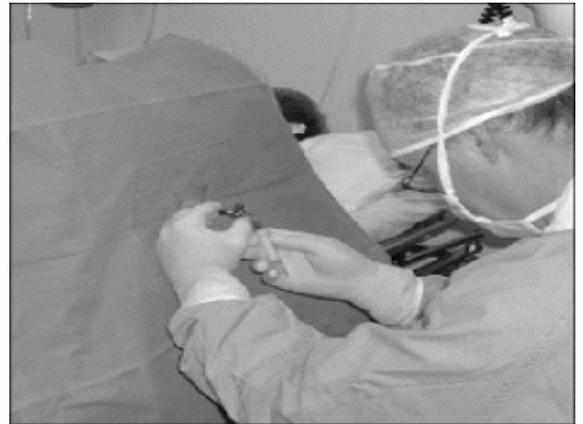


Fig. 7.

Analysis

The following analyses are commonly carried out and will be influenced by what is available in your reference lab.

- tube 1: glucose and protein (+ cell count if it's a bloody tap)
- tube 2: culture and cytology
- tube 3: cell count

Any of the tubes can be used to assess xanthochromia. The red-cell counts of tubes 1 and 3 should be compared if a bloody tap is suspected. The red-cell count should be at least 25% lower in tube 3 to support this diagnosis.

Post-procedure headache

The following factors related to post-lumbar puncture headache (PLPH) have been identified:⁴

- being in the 18- to 30-year age group, female, and with a prior history of headaches increases the risk of PLPH;
- needle size: the smaller the needle the fewer headaches;
- orientation of the needle bevel parallel to dural fibres on insertion reduces the incidence of headaches;
- replacement of the stylet prior to withdrawal reduces the incidence of headaches.

The following factors have NOT been shown to be related to PLPH:

- volume of CSF removed;
- period of recumbency following LP;
- increased hydration following LP.

Conclusion

The advent of effective vaccines (particularly for Haemophilus influenza) have dramatically reduced the number of LPs done in our emergency departments. Technology continues to improve our ability to gain information non-invasively (albeit at significant cost). Although the place of LP in our quiver of procedural skills will continue to evolve, it is unlikely, I submit, to completely disappear anytime soon. In the meantime, rural patients will be well served if their physicians are able, when necessary, to offer this service.

John Wootton, MD, CCFP, FCFP, Shawville, Que., Scientific editor, CJRM

Correspondence to: Dr. John Wootton, Box 1086, Shawville QC J0X 2Y0

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A primer on rural medical politics: 5. College of Family Physicians of Canada

Keith MacLellan, MD

CJRM 2002;7(3):212-4

Rural health care is sustained by broadly-skilled general practitioners, many with advanced skills. Yet our medical system is designed for either specialists or generalist physicians restricted to rigid primary models of health. In this, the fifth in a series of articles, 1–4 Dr. MacLellan looks at the role of the College of Family Physicians of Canada in rural medicine using, as always, the implementation of the Joint Position Papers on Rural Maternity Care and on Advanced Maternity Skills and Cesarean Section. 5,6

The College of Family Physicians of Canada (CFPC) was founded in the modest Vancouver Palomar Supper Club on June 17th, 1954, aided by a \$10 000 grant from the Canadian medical Association (CMA) and \$7500 yearly from Wyeth Pharmaceuticals.

CFPC: rural roots

Like the Society of Rural Physicians of Canada (SRPC), the CFPC had its origins in rural Canada and was founded to enhance the roles, reputation and well-being of the generalist.

The first 25 years of the CFPC were marked by extraordinary progress in carving out a respected position for generalists in Canada's health system, but not without crossing some Rubicons. Even the semantic question of calling the discipline "Family Practice" or "General Practice" threatened to split the organization at one time, as did some of the usual Canadian regional differences.

But the most divisive debates had to do with whether the CFPC should be a purely academic organization or whether it should also involve itself in the "economic" issues of generalists (e.g., fees, working conditions, politics). A corollary debate, equally contentious, was whether certification of family practice graduates would lead to a two-tiered split in the generalist movement. Eventually the matter was settled with the CFPC being structured to serve academic matters and promote certification. Most Quebec members disagreed and formed the Fédération des médecins omnipraticiens du Québec (FMOQ), which represented generalists at the provincial negotiating table while at the same time furthering generalist education (but, initially, strongly

opposing certification).

Two-tiered generalists

The embers of these internal debates still smolder today. The CFPC has now reversed the decline of the generalist and established Family Practice as a serious discipline with a strong research capability. It has carved out an unassailable place for itself among the specialties and the universities, even in Quebec. All new generalist graduates in Canada must now complete certification exams after a 2-year CFPC accredited training program. CFPC certification is also required by many licensing authorities to determine portability of practice, and universities usually insist on certification for academic careers, making membership in the CFPC less voluntary than its founders envisaged. Yet in many rural areas, most practitioners still are not members of the CFPC or certificants — an example of the feared two-tiered generalist system. The reasons are complex, one being the preponderance of international medical graduates (IMGs) in some rural areas (many semi-indentured, in part because they do not have CFPC certification). As well, the SRPC was founded partly because of the view commonly encountered in rural areas that CFPC-endorsed generalist training was not ideal preparation for rural practice. It had strayed too far into the woollier aspects of primary care at the expense of training the generalist to function on the fluctuating levels of primary, secondary and tertiary care that rural practice demands.

Fragmentation

The pressures from rural areas form a small part of the fragmentary pressures within an organization such as the CFPC. Competing interests from a variety of primary care "sub-disciplines" combine with the natural specialization forces within medicine to make the true comprehensive generalist (rural or urban) envisioned by the CFPC an increasingly rare bird. The current shortage of physicians in Canada is the single greatest driver of these fragmentary forces. The relative "newness" of the discipline of Family Practice, the pressure from established specialties and the centralized, research oriented nature of university-based training (including the CFPC's "own" Departments of Family Medicine) all add to the difficulties the CFPC must endure in representing the true generalist. Recently, a good deal of soul-searching has been occurring over the hesitancy of new medical graduates to choose Family Medicine as a residency. Finally, the arguments of how the CFPC should involve itself in the day-to-day and long-term "economic" and political practice issues of the generalist have resurfaced in these days of government restraint and remodelling. Is the old "academic" structure of the CFPC up to the challenge of supporting its varied membership? These and many other challenges make the CFPC's actions uncertain and complex when responding to the Joint Position Papers on Rural Maternity Care and on Advanced Maternity Skills and Cesarean Section.^{5,6}

Rural medicine initiatives

Providing adequate health care to rural Canadians is a hot political topic these days amongst governments — the prime funding agencies in this sprawling country so much more rural than any other Western nation. When the SRPC arrived on the scene, claiming powerful existing or potential government sympathy, the CFPC sat up and listened. After the inevitable misunderstandings and posturing on both sides were over, a respectful and inventive cooperation (typical of generalists) has followed. The CFPC has set up a Rural Committee, a working group that produced a rural curriculum for postgraduate training. This curriculum endorses a rural stream in postgraduate training — a large concession indeed for the CFPC, given the fear of fragmentation. The curriculum also makes allowances for advanced skills training, now formally recognized in a new, nationally accredited R3 "Enhanced Skills For Family Practice" program,⁷ highlighted in the Spring 2002 issue of CJRM. Recently, the CFPC has agreed to provide a "home" for GP anesthetists, guided by a joint committee that includes the Canadian Anesthesiologists' Society (CAS) and the SRPC. The Joint Position Papers on Rural Maternity Care and on Advanced Maternity Skills and Cesarean Section have been approved by the CFPC Board and published in their journal.^{5,6} The practice eligible route to certification has been made administratively easier, and the CFPC is encouraging provincial programs to help IMGs obtain certification. Although the one year "rotating internship" was of great benefit to rural medicine, it stands little chance of returning.

Funding

The CFPC is not just a rural medicine organization, as should be clear from the above. Its means and budget are severely limited even for its present tasks. In these days of economic cutbacks, new funding is hard to come by. "Money makes the world go 'round," it is said. It certainly can make major change easier. If the CFPC is going to help implement the Joint Position Papers on Rural Maternity Care and on Advanced Maternity Skills and Cesarean Section,^{5,6} it will need to adjust itself internally while challenging the academic world and those around it. The CFPC may even find in rural medicine new ways of supporting the true generalist, without losing members who are not practising full, comprehensive care. But it is not going to do so without major recurrent funding and a new policy direction. Nor can it do so alone without the agreement of the other medical organizations such as the CMA, the Association of Canadian Medical Colleges (ACMC) and its sister accrediting body, the Royal College of Physicians and Surgeons of Canada (RCPSC).

Where to?

Should the CFPC, still essentially an accrediting institution, lobby governments for rural funding, or is this a job for professional associations like the CMA and the SRPC? Who deals with issues of competence? What about portability of licensure for all these generalists who can perform cesarean sections? How do we certify "offshore" graduates in advanced obstetrics, and what relation will they bear to CFPC-certified Canadian graduates? How should the CFPC deal with the ACMC and the powerful academic interest groups? Can the RCPSC, with its 35 or so

disciplines, even be made to react in a useful way? What about FP-psychotherapists, Emergency Medicine, Palliative Care, hospitalists and so on? How does primary care reform fit in?

Rural Canadian women and the Joint Position Papers on Rural Maternity Care and on Advanced Maternity Skills and Cesarean Section^{5,6} can easily be lost in discussing such complex matters. The rural medicine movement must move carefully or risk a "backlash." At the same time, it has been by maintaining a sharp and unwavering focus on specific issues of rural population health and access to services that we have achieved the present successes, some coming with the help of the only other national generalist physician organization in Canada — the CFPC. In truth, the SRPC, with its sharp rural focus and championing of comprehensive care, will continue to challenge and help the CFPC.

Next up: Marshall Dillon (the licensing authorities), Chester (the CMA) and the rodeo (RCPC).

Competing interests: None declared.

Correspondence to: Dr. Keith MacLellan, PO Box 609, Shawville QC J0X 2Y0

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The SRPC's 10th Annual Rural and Remote Conference

Peter Hutten-Czapski, MD

CJRM 2002;7(3):215-6

Two hundred and forty rural doctors nose to nose doesn't happen often, but the 10th Annual Rural and Remote Conference in Kelowna in April was one of those occasions. The meeting was a many-layered thing.

Scientific

There was the scientific layer, where we discussed, among other things, high altitude medicine, white water paddling emergencies, bear attacks and transport. Quite an eclectic and, yes, rural curriculum.

Grassroots and "real life"

There was another layer that saw small groups dealing with real life concerns regarding working conditions, women in rural practice, obstetrics, anesthesia, surgery and others. This layer dealt with grassroots policy and at times served as a support group where people could vent their problems. Others gave support and shared solutions, including the beneficial effects of an GP/OB on-call system to make the service sustainable.

Political

There was a political layer that included a visit from BC's Minister of Health Planning, press conferences and meetings of BC rural doctors, including the BCMA president and some board members. This layer was quite timely because BC had just announced significant cuts to rural hospitals 2 days prior.

Recognition

There was a recognition layer, where the Society's first Rural Service Awards were presented to 87 of our peers (see [Appendix 1](#)) who have served their rural communities for between 10 and 34

years and have provided outstanding work, often in challenging circumstances. Dr. George Magee, 34 years in rural practice, gave an impromptu speech, where he said:

The SRPC provided me with a link with the many other truly rural docs who were labouring in the trenches, unsung heroes preserving the practice of real full-service medicine. It has given me a feeling of importance, a sense of appreciation and a hope that we can save rural medicine for Canada."

The Keith Award for excellence in training rural family physicians was awarded to the Memorial Family Practice Program.

Business

There was a business layer that involved meetings of the leadership and general membership of the Society where work was done and the core of the society elected and renewed.

Social

There was a social layer that involved wine, food, song and hockey. For the interest of unity I will not reveal that the fans, led by the trumpet of Leduc, inspired the East to overcome the unbiased officiating.

Support

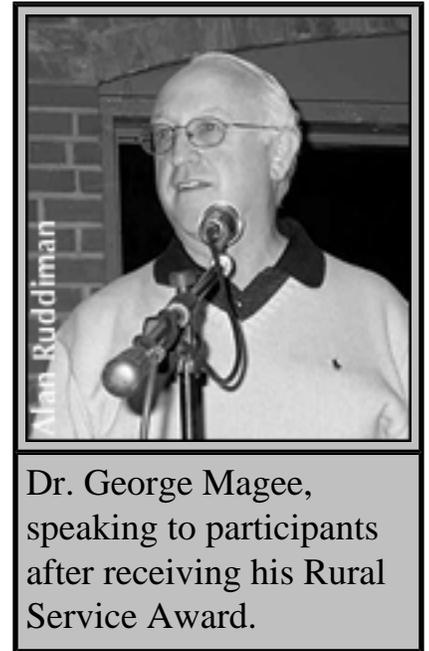
There was a support layer that provided babysitting, directions, conference kits, audio visual support and the like.

Administration and volunteers

In the very centre was the administrative layer that ran the conference and ensured that all went smoothly (even when the micro-brewery forgot our beer order). Thanks to all, and particularly the volunteers.

Next year

We'll be doing it all again for the 11th AGM, in Kelowna, BC, April 24-27, 2003.



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A challenge for CJRM

CJRM 2002;7(3):217

To the Editor:

I believe CJRM should become the vehicle for the publication of rural health research in Canada. The unique challenges facing health care providers in the many rural and remote areas of our country will not be met effectively unless tackled from a national perspective. While many initiatives by local health jurisdictions have had some success, these are short term fixes at best. The time has come for Canada — not individual provinces or regions — to research and address new solutions. Only in this way can we take advantage of the synergistic impact of cooperative efforts across the country and ensure that policies are not designed for the good of one region but at the expense of another.

A nationally focused research voice is needed to bring the respective parties together and generate the will necessary to carry out these efforts. Who better to take up this mantle than the CJRM?

D. Soleski

Okanagan-Similkameen Health Region
Kelowna, BC

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Making rural docs in Northwestern Ontario (FMN: NWO Program)

CJRM 2002;7(3):217-8

To the Editor:

Appropriate medical training is one of multiple factors that influence where physicians choose to practise. Other important factors include the backgrounds of physicians and their spouses, community attributes (e.g., location, recreational opportunities, schools, employment options), physician payment and working conditions. In the recent article by Hutten-Czapski,¹ study data support earlier work from the United States² that medical schools and residency programs can influence the practice locations of their graduates.

Why are graduates of Family Medicine North: NWO (Northwestern Ontario) more likely to practise in rural or northern Canadian communities with populations of 10 000 than graduates of other family medicine residency programs? I believe there are a number of different factors that interact.

1. The program goal is to provide family physicians with the necessary knowledge, skills, and attitudes to practise in rural, northern and remote communities in Canada.
2. The selection of incoming residents who embrace the concepts of independent learning within a preceptor based community setting.
3. Self-selection of incoming residents who are prepared to move to a northern setting that includes rural and remote rotations.
4. Nurturing and supporting residents who possess a spirit of adventure to live, learn and play in multiple communities over their 2 years of training.
5. Core rural family medicine rotations in regional rural centres of 5000-15 000 people (16 weeks) and in small rural communities of 5000 people (8 weeks).
6. Opportunities to complete other core and elective rotations in rural or northern communities.
7. Specialty rotations with teaching provided by family medicine friendly specialists who work collaboratively with community family physicians.
8. Core workshops, seminars, and presentations that are immersed in the context of rural and northern communities and that provide strategies for handling clinical problems where on-

site specialists may not be available.

9. An educational administrative structure, where rural and northern family medicine preceptors are participants in the design of curriculum, the recruitment and selection of residents, the evaluation of residents and implementation of remedial training when necessary, the delivery of many of the academic workshops and presentations, and the development of program policies.
10. Appropriate funding from government to support costs specific to rural and northern training, such as transportation, accommodations, technological support and teaching stipends.
11. Exposure of residents to communities where family physicians are reimbursed through a variety of different payment systems, including fee-for-service, alternative payment plans, sessional fees and community contracts.

The Canadian experience in the design and delivery of appropriate training for rural and northern practice is growing. Our goal as rural educators is to critically examine the educational programming that we are involved in and develop strategies together to build upon our successes.

James Goertzen, MD, CCFP, MCISc

Program Director

Family Medicine North: NWO

955 Oliver Rd.

Thunder Bay ON

P7B 5E1

jgoertzen@hscn.on.ca

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Making rural docs in Northeastern Ontario (NOFM Program)

CJRM 2002;7(3):218

To the Editor:

Hutten-Czapski and Thurber's article "Who makes Canada's rural doctors?" from the CJRM Spring 2002 is important and timely. Their data provided us at the Northeastern Ontario Family Medicine (NOFM) Program with an opportunity to reflect upon the challenges in achieving our mandate to produce family physicians who are ready for northern and rural practice.

The authors correctly point out the lack of a precise definition of rurality that captures all rural physicians. They are to be commended for employing a system of tracking that attempts to accurately portray a physician's practice location at specified time periods. Our own experience tracking our program's graduates has shown us that this process is fraught with challenge.

The study demonstrates excellent results for recruitment to rural practice of graduates from several family medicine training programs. There are likely several lessons to be learned from an analysis of strategies employed by Memorial University of Newfoundland, Université Laval, and Family Medicine North in Thunder Bay to encourage graduates to consider rural practice. The study also reports rural recruitment results for the NOFM program that echo previous reports, including the study by Pong and colleagues,¹ which was cited by Hutten-Czapski and Thurber.

The NOFM program has vigorously tracked its graduates since its inception in 1991. In fact, Pong and his colleagues at the Centre for Rural and Northern Health Research continue to survey cohorts of our graduates annually, including groups already in practice. Their findings closely mimic our own surveys, which reveal that 65% of our family practice graduates are working in northeastern Ontario practices now, and 70% are in northern and rural (< 10 000) Ontario communities. Large numbers of NOFM graduates have been recruited to serve the needs of underserved northeastern Ontario communities, albeit those with populations greater than 10 000.

Our residents receive all of their training in northeastern Ontario. This area has diverse demography, geography, culture and language, and includes four larger hub communities

(Sudbury, Timmins, North Bay and Sault Ste. Marie). Although parts of our region would never be classified rural, authorities concede that most of it is underserved. We are proud of our success in recruiting residents to northern and rural practice.

We thank the authors for their contribution to this area, and look forward to further discussions of strategies that might improve recruitment of physicians to all communities in need.

Thomas P. Crichton, MD, CCFP
Program Director, NOFM
Northeastern Ontario
Family Medicine Program
Assistant Professor
Department of Family Medicine
University of Ottawa
Ottawa, Ont.

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Basic office software: word processing and beyond

Barrie McCombs, MD, CCFP, CCFP(EM)

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"I got my education, out behind the barn, I ain't a-fooling, no sir-ee. Passed each examination, out behind the barn, but it almost made a wreck out of me." — Little Jimmy Dickens, c. 1950

If your office computer has Microsoft Office or some other "office suite" software installed, you have many powerful tools that can be used to manage your office more efficiently. Many offices have this software, but use it only for basic word-processing tasks. That is like buying a sports car, just to drive to the corner store for groceries!

Office suite software is "integrated," so that each component has a similar on-screen appearance. Information can also be exchanged between components. For instance, a spreadsheet table can be easily copied into a word-processor document.

This software has the greatest potential if you do not yet use scheduling, billing or electronic medical record software in your office. If you eventually purchase one of these medical software programs, the vendor should be able to transfer your existing data into it.

Microsoft Office

This article concentrates on the use of the word-processing, database, and spreadsheet components of Microsoft (MS) Office, the most popular office suite program. It also contains contact management and electronic mail components. Two alternatives are described at the end of the article.

Word processing (MS Word)

The creation of text documents, such as referral letters, is a common medical task. Does your office use time-saving word-processing features, such as creating a "template" for each type of

letter instead of retyping it completely? A template can contain all your letterhead information, even graphics, thus saving the cost of pre-printed stationery. It could also contain an outline for your standard referral letter. The "mail merge" feature enables you to create a list of patients or physicians, then send the same letter to each, but with a personalized name and address, or even an "electronic signature."

It is time-consuming to write out patient information on laboratory or imaging requisitions. If the required information is saved in a Microsoft Word file, it is possible to have Word print a whole page of such labels at one time.

Patient information on many diseases is freely available on the Internet, but may not be exactly right for your practice. It is easy to download such information into your word processor, then customize it to suit your practice. You could also download clinical practice guidelines and summarize them for quick reference on your desktop or handheld computer.

Databases (MS Access)

Database programs allow the user to create customized lists of information, then sort or filter the data as required. If you don't already have a patient database as part of a billing or scheduling practice, it is easy to create one that contains basic patient information, such as name, address, telephone, birthday, gender and health care number. If you already have this information in another software package, ask the vendor if it can be "exported" to Access, so that you can analyze it. By using "queries" or "filters" you can produce lists of all male diabetic patients, all women over age 40, or any other desired criteria. These lists could then be used for preventive medicine callbacks.

Another handy use for a database is the creation of quick reference lists, such as your referral physicians, local pharmacies, social agencies, or any other information that you need quickly and repeatedly.

Spreadsheet (MS Excel)

Spreadsheets allow you to create numerical tables and to quickly create graphs from the data. The graphing feature will be very useful if you do any research or publish medical articles. Excel can also manage text-based lists, but is not as powerful as Access for this purpose. If you are considering the purchase of a new computer or electronic medical record system, you could use a spreadsheet to create a financial model to study the effect of different purchase options. Or you could use it to keep a list of your study credits, making it easy to total them up when it is time to report them to a professional organization.

Presentations (MS PowerPoint)

You have probably seen PowerPoint used to illustrate presentations at conferences. You could also use this software to create your own patient-teaching materials, particularly for those topics where patients need to learn at their own pace. Some physicians have placed an older computer in their waiting room to display "preventive medicine" presentations.

Electronic mail (MS Outlook)

This email and "contact management" program is part of the MS Office Pro package. This program could also be used to maintain a patient database, particularly if you wish to communicate with patients by electronic mail. If you have an older version of Outlook, be sure to upgrade it because it is a favourite target of the nasty folks who create email viruses.

Desktop publishing (MS Publisher)

This program is an optional add-on for MS Office that provides document design features not found in MS Word. It might be useful in larger clinics or offices that create a lot of patient information brochures or presentation materials.

Web site management (MS FrontPage)

The "premium" version of MS Office includes the FrontPage Web site management program. This is a useful tool for designing and managing your own office Web site to provide administrative or clinical information on the Internet.

Microsoft Works

This inexpensive, user-friendly program comes pre-installed on many new computers. It contains many of the same features as MS Office. Data files created in Works can be imported into MS Office components if you decide to upgrade to a more powerful program.

Corel Word Perfect Office Suite

The core of this mid-range package is the Word Perfect word-processing program. It also provides spreadsheet and database functions, similar to Microsoft Office. Both Word and Word Perfect are capable of reading the other program's text files, but graphics or complex formatting may appear differently in the other program.

Hardware requirements

Before you purchase any software program, be sure to check the minimum requirements for the central processor speed, amount of RAM (random access memory) and hard-drive capacity. Your

computer should meet (or preferably exceed) these requirements.

Competing interests: None declared.

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RuralMed

RuralMed is an Internet email discussion group dedicated to rural medicine. It was established by the [Society of Rural Physicians of Canada](#) in April 1995, with the cooperation of the McGill University Computing Centre. Although its focus is Canadian, its membership is international.

To participate in RuralMed you must be able to send and receive email. Subscription is by request to the listowner. Simply send a message to admin@srpc.ca.

Include your full name and email address. If you include a short biography it will be posted to the list as your introduction. You can also access both the RuralMed archives and a RuralMed subscription form through the [SRPC home page](#).

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Instructions for Authors

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Material in the following areas will be considered for publication.

- Original articles: research studies, case reports and literature reviews of rural medicine
- Commentary: editorials, regional reviews and opinion pieces
- Clinical articles: practical articles relevant to rural practice. Illustrations and photos are encouraged
- Off Call articles: a grab-bag of material of general interest to rural doctors (e.g., travel, musings on rural living, essays)
- Cover: artwork with a rural theme

Manuscript submission

Submit 3 hard copies of the manuscript and a copy on computer disk to Editor, Canadian Journal of Rural Medicine, Box 1086, Shawville QC J0X 2Y0; 819 647-2972, fax 819 647-2845, cjrm@fox.nstn.ca. Include a covering letter indicating that the piece has not been published or submitted for publication elsewhere. Hard copies of the manuscript should be double-spaced, with a separate title page, an abstract of no more than 200 words, followed by the text, full references and tables (each table on a separate page).

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References

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Accepted manuscripts

Authors will be required to submit the most recent version of the manuscript by email or on diskette. Please specify the software used.

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Appendix 1. Recipients of the 2002 Rural Service Awards (in random order)

John Rigsby Hedden	David R. Shaw	Jobst Von Heymann	Jill Konkin	Jonathon E.G. Morgan
Don H. Klassen	Alistair Anderson	Samuel Appavoo	Hugh Hindle	Teresa A. O'Driscoll
Murray Bruce Reimer	Nancy J. Anderson	James Rourke	Michael Cortens	Donna Courchesne
Allan Ranson	Raymond McIlwain	Leslie Rourke	Mark Dahmer	Maurice Lamarche
Diana Kelland	Gerald Moore	Patrick Conlon	John F.C. Dove	Keith MacLellan
David Wiseman	Bent Hougesen	Brian Moulson	Carl Eisener	Thomas O'Neill
Mary Frances Savory	George Magee	Rand Rudland	Patti Louttit	John Wootton
Gordon Hutchinson	Charles Helm	Bob Henderson	Karen Mazurski	Frank Timmermans
Ron Clark	Mary T. Johnston	Joseph Cybulski	Patricia Vann	David J.M. Butcher
Robert Scott McNie	Sydney McKnight	Ian R.A. Park	Mark Whittaker	Abraham de Klerk
Faye MacKay	Elizabeth Rhoades	John Slater	Stephen G. Arif	David Howe
Erik T. Paterson	Dale Dewar	Peter Wells	Wojciech Aniol	Anita Foley
Keith White	Lionel A. Lavoie	Peter Hutten-Czapski	Richard Parker	Robert Clare Allin
Denis R.C. Brown	Bev Karras	Corrine Mary Gehrels	Sherry Reed-Walkiewicz	Ron Aspinall
Fred Hamilton	Elisabeth Lewke-Bogle	W.F. John Knox	Diane Zielke	Michael T. Johnston
Frank Healey	Joe Johnston	Mohamed Ravaliala	Leonard F.J. Kelly	Peter Loveridge
John R.J. Dimma	Kenneth S. Babey	Fred French	Robert G. Minty	
Alan W. Ruddiman	Neal C. Stretch	Robin Laughlin		

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