

Location of family medicine graduates' practices

What factors influence Albertans' choices?

Olga Szafran, MHSA Rodney A. Crutcher, MD, MMEDED, CCFP(EM), FCFP
R. Gordon Chaytors, MD, CCFP, FCFP

ABSTRACT

OBJECTIVE To examine factors that influence family medicine graduates' choice of practice location.

DESIGN Cross-sectional, retrospective survey employing a self-administered, mailed questionnaire.

SETTING Family medicine residency programs at the University of Alberta (U of A) and the University of Calgary (U of C) in Alberta.

PARTICIPANTS Graduates (n=702) who completed the family medicine residency program at U of A or U of C between 1985 and 1995.

MAIN OUTCOME MEASURES Current practice location; 23 factors influencing current practice location; physicians' sex; community lived in until 18 years of age.

RESULTS Response rate was 63% (442 graduates completed the questionnaire). Overall, the most influential factors in attracting graduates to their current practice locations were spousal influence, type of practice, and proximity to extended family. Type of practice, income, community effort to recruit, medical need in the area, and loan repayments had a substantial influence on family physicians' decisions to practise in rural areas. Male physicians ranked type of practice, whereas female physicians ranked spousal influence, as having the most influence on choice of practice location. Significantly more female than male physicians identified working hours, familiarity with the medical community or resources, and availability of support facilities and personnel as having a moderate or major influence on their decisions.

CONCLUSION Differences between rural and metropolitan residents and between sexes affect family medicine graduates' choices of practice location. These differences should be taken into account in recruitment strategies.

RÉSUMÉ

OBJECTIF Examiner les facteurs qui influencent le choix du lieu de pratique des diplômés en médecine familiale.

CONCEPTION Une enquête transversale rétrospective au moyen d'un questionnaire postal à remplir par l'intéressé.

CONTEXTE Des programmes de résidence en médecine familiale à l'University of Alberta (U of A) et à l'University of Calgary (U of C), en Alberta.

PARTICIPANTS Les diplômés (n=702) qui ont complété un programme de résidence en médecine familiale à l'U of C ou à l'U of A entre 1985 et 1995.

PRINCIPALES MESURES DES RÉSULTATS Le lieu de pratique actuel; 23 facteurs influençant le lieu de pratique actuel; le sexe des répondants; les collectivités où ils ont vécu depuis l'âge de 18 ans.

RÉSULTATS Le taux de réponse s'élevait à 63% (442 diplômés ont rempli le questionnaire). Dans l'ensemble, les facteurs d'influence les plus prépondérants dans le choix de leur lieu de pratique actuel étaient l'influence du conjoint ou de la conjointe, le genre de pratique et la proximité des membres de la famille. Le genre de pratique, la rémunération, les efforts de la collectivités dans le recrutement, les besoins de services médicaux dans la région et le remboursement des dettes exerçaient une influence considérable sur les décisions des médecins de famille d'exercer en milieu rural. Les hommes médecins ont identifié le genre de pratique et les femmes médecins, l'influence du conjoint, comme étant le facteur le plus important dans le choix du lieu de l'exercice de la médecine. Un nombre beaucoup plus grand de femmes que d'hommes ont identifié les heures de travail, la familiarité avec la collectivités ou les ressources médicales et la disponibilité des aménagements et du personnel de soutien comme ayant eu une influence de modérée à importante sur leur décision.

CONCLUSION Des distinctions entre les résidents d'origine rurale ou urbaine et selon le sexe influencent le choix du lieu de leur pratique des diplômés en médecine familiale. Il y a lieu de tenir compte de ces différences dans les stratégies de recrutement.

This article has been peer reviewed.

Cet article a fait l'objet d'une évaluation externe.

Can Fam Physician 2001;47:2279-2285.

RESEARCH

Location of family medicine graduates' practices

Canadian family physicians currently have the opportunity to set up practice in geographically diverse settings. Deciding where to practise is important to physicians and their families; to health care administrators, planners, and policy makers; to educators; and to communities in which medical care will be provided. Understanding factors that family physicians consider important in choosing a practice location could influence both educational programs and physician recruitment strategies.

Several factors have been identified as being important in determining practice location. Alberta family physicians and general practitioners reported accessibility to consultants, opportunities for continuing medical education, personal factors, differences in billing, economic incentives, career opportunities, and colleague support as determinants of practice location.¹ Primary care physicians in the United States most often cited the opportunity to join a practice or a partnership, climate and geographic features of the area, availability of support facilities or staff, and preferences for urban or rural living as influencing practice location.² Family practice residents identified spouses' wishes, medical community that welcomes family physicians, recreation and culture, and proximity to family or friends as being the most important considerations.³

Factors influencing practice location have also been studied in relation to the choice between urban and rural practice. Physicians are reported to be more inclined to select urban practice for professional and community-related reasons,^{4,5} such as access to medical consultation, availability of continuing medical education, proximity to extended family and friends, spouse's job or education opportunities, cultural advantages, salaried position, and educational opportunities for children.⁶ Non-urban practice location for medical school graduates in Manitoba was associated with having a non-urban background, being male, and having a father who was either a farmer or a health care professional.⁷ Ontario family medicine graduates from rural home towns were 2.3 times more likely to choose a rural community as a first practice location.⁸ In Alaska, size of community, opportunity for

Ms Szafran is a Research Coordinator in the Primary Care Research Unit of the Department of Family Medicine at the University of Alberta in Edmonton. Dr Crutcher is an Associate Professor in the Department of Family Medicine at The University of Calgary. Dr Chaytors is a Professor in the Department of Family Medicine at the University of Alberta.

subsistence hunting and fishing, and a feeling of being needed had a significant influence on rural location.⁶ Rural family physicians have also placed less importance on the availability of hospital consultants.⁹ Financial incentives and loan repayment do not seem to have a great influence on practice location for most physicians^{2,3,10}; however, payment of loans was more important for those in rural practice.¹⁰ Spousal influence has been an important factor for physician recruitment and retention for rural practice in Canada.¹¹

Since the 1980s, as the number of female physicians in medical schools increased, employment of physicians' spouses has become an important consideration in practice location.⁹ Spousal employment has been ranked either as the most important factor influencing practice location^{9,12} or as one of the top five factors.¹⁰ Seventy percent of spouses believe they will have a substantial influence on the decision regarding practice location.¹³

To our knowledge, no studies to date have assessed how differences in sex affect where family physicians will practise. Our study examines the overall influence various factors had on the choice of current practice location among Alberta family medicine graduates and compares these factors by current practice location, physician sex, and community lived in until 18 years of age.

METHODS

Design and sample

A cross-sectional, retrospective population survey of Alberta family medicine graduates was conducted from October 1996 to February 1997. The sampling frame included all graduates who completed the residency program at the University of Alberta (U of A) or The University of Calgary (U of C) between 1985 and 1995, inclusive (n= 702). No graduates were excluded. A self-administered questionnaire was mailed to all 324 family medicine graduates from the U of A and 378 from the U of C. Each graduate's most recently known mailing address on file was cross-referenced with the 1996 *Canadian Medical Directory* or the Canadian Post-MD Education Registry (CAPER). Nonrespondents were contacted by reminder notices sent twice at 4-week intervals.

Survey questionnaire

The questionnaire addressed four major areas: graduates' demographic data, medical education, career history, and family medicine residency program evaluation. The section of the questionnaire on career history asked

about current practice location and factors (adapted from Cooper et al²) that influenced choice of practice location. The questionnaire was pilot-tested for face validity on a group of family medicine residents at the U of C.

Graduates were instructed to indicate the degree of influence (major positive, moderate positive, no influence, moderate negative, or major negative) that each of 23 factors had on their decision to practise in their current locations. They also ranked, in descending order, the three factors that had the most influence on their practice location.

Current practice location and community lived in until 18 years of age were defined as rural (<10 000 population), regional (10 000 to 200 000), or metropolitan (>200 000).

Confidentiality of responses was maintained by using a numerical coding system for each questionnaire. The Health Research Ethics Board of the U of A approved the study.

Study measures

The relationship between the 23 factors and current practice location, physician sex, and community lived in until 18 years of age was examined.

Data analysis

While the questionnaire addressed several issues, only data on factors influencing practice location are reported here. Descriptive data analysis was performed using SPSS 8.0 for Windows. The χ^2 test was used to test for relations between discrete variables. To minimize the probability that findings were due to chance alone, we used an α level of .01 (rather than .05) to increase rigour of the determination of statistical significance.

RESULTS

A total of 442 (63% of 702) graduates completed and returned the survey questionnaire, 233 (61.6% of 378) U of C graduates and 209 (64.5% of 324) U of A graduates (**Table 1**). Respondents were similar to the entire population of graduates for 1985 to 1995 in terms of sex (53.2% men and 46.8% women in the entire group).

Factors influencing practice location

Graduates ranked the top three factors (from a list of 23) that were most influential in attracting them to their current practice locations (**Table 2**). Overall, the top three factors selected were spousal influence (40.6%), type of practice (39.9%), and proximity to

Table 1. Characteristics of respondents

CHARACTERISTICS	NUMBER OF RESPONDENTS	
	N	%
SEX		
Male	229	51.8
Female	202	45.7
Not recorded	11	2.5
AGE AT COMPLETION OF FAMILY MEDICINE PROGRAM (YEARS)		
24-26	121	27.4
27-29	159	36.0
30-32	69	15.6
33-35	43	9.7
>35	41	9.3
Not recorded	9	2.0
COMMUNITY LIVED IN UNTIL 18 YEARS OLD*		
Rural	108	24.4
Regional	153	34.6
Metropolitan	287	64.9
CURRENT PRACTICE LOCATION		
Rural	85	19.2
Regional	113	25.6
Metropolitan	224	50.7
Not recorded	20	4.5
LENGTH OF TIME AT CURRENT PRACTICE LOCATION (YEARS)		
<1	81	18.3
1-2	100	22.6
3-4	90	20.4
5-10	132	29.9
>10	21	4.8
Not recorded	18	4.1

extended family (27.2%). Four factors—political environment, potential teaching opportunity, incentives for loan repayment, and having done a locum in a similar community—were identified as least influential.

Current practice location

Analysis by current practice location revealed substantial rural-metropolitan differences. Type of practice, income, community effort to recruit, medical need in the area, and loan repayment significantly influenced family physicians' decision to practise in rural or regional locations (**Table 3**). In contrast, proximity to extended family, working hours, professional opportunities, familiarity with the medical community and resources, being brought up in the community, education for children, cultural influences, and teaching opportunities were more influential for those practising in metropolitan areas. Training in a similar size community influenced those choosing rural practice to the same degree it influenced those choosing metropolitan practice.

RESEARCH

.....

Location of family medicine graduates' practices

Table 2. Factors influencing practice location

INFLUENTIAL FACTORS	MOST INFLUENTIAL FACTOR (FACTOR RANKED 1) N = 426*		ONE OF TOP 3 FACTORS N = 426	
	N	%	N	%
Spousal influence	114	26.8	173	40.6
Type of practice	80	18.8	170	39.9
Proximity to extended family	38	8.9	116	27.2
Opportunity to join group practice	21	4.9	83	19.5
Working hours required for practice	16	3.8	71	16.7
Professional opportunities	21	4.9	66	15.5
Familiar with medical community and resources	10	2.3	66	15.5
Availability of support facilities and personnel	12	2.8	64	15.0
Size of community	14	3.3	61	14.3
Climate or geographic features	14	3.3	59	13.8
Recreational facilities	13	3.1	58	13.6
Income	13	3.1	52	12.2
Community recruitment effort	12	2.8	39	9.2
Recruitment by colleagues	8	1.9	37	8.7
Medical need in area	8	1.9	30	7.0
Brought up in community	5	1.2	24	5.6
Education system for children	2	0.5	24	5.6
Training in similarly sized community	8	1.9	22	5.2
Cultural influences	6	1.4	19	4.5
Political environment	4	0.9	12	2.8
Potential teaching opportunity	3	0.7	11	2.6
Incentive for loan repayment	4	0.9	8	1.9
Locum in similar community	0	0.0	7	1.6

*Number of respondents who ranked a most influential factor.

Sex

Male family medicine graduates ranked type of practice (24.7%) and female graduates ranked spousal influence (39.4%) as the most influential factor. Significantly more men indicated that income, high medical need in the area, and climate or geographic features influenced their choice of current practice location (Table 4). In contrast, significantly more women identified working hours, familiarity with the medical community and resources, and availability of support facilities or staff as influencing their choice.

Community lived in until 18 years of age

Graduates tended to practise in communities the size of those they lived in until 18 years of age. Percentages of residents brought up in rural areas who later went to rural practices and students brought up in metropolitan areas who later went to metropolitan practices were similar.

DISCUSSION

To our knowledge, our study is the first to report how differences in sex influence practice location. Men ranked type of practice as having the greatest influence on practice location, and women ranked spousal influence as greatest. A reported 52% of physicians' spouses are either physicians or other professionals.¹⁰ Spouses with higher levels of education usually prefer larger communities.¹³ Female family physicians are also more influenced by the flexibility of working hours, familiarity with the medical community and resources, availability of support facilities and staff, and potential teaching opportunities. Urban and metropolitan locations have more to offer in the way of these factors.

The proportion of women admitted to Canadian medical schools has increased substantially over the

Table 3. Factors with a positive influence on practice location by current practice location

INFLUENTIAL FACTORS	CURRENT PRACTICE LOCATION						P VALUE
	RURAL N = 85		REGIONAL N = 113		METROPOLITAN N = 224		
	N	%	N	%	N	%	
Spousal influence	51	60.0	74	65.5	161	71.9	.10
Type of practice	81	95.3	107	94.7	198	88.4	.008
Proximity to extended family	32	37.6	58	51.3	134	59.8	.002
Opportunity to join group practice	57	67.1	69	61.1	145	64.7	.47
Working hours required for practice	30	35.3	64	56.7	160	71.4	10 ⁻⁶
Professional opportunities	50	58.8	75	66.4	174	77.7	.002
Familiar with medical community and resources	36	42.4	50	44.2	179	79.9	10 ⁻⁶
Availability of support facilities and personnel	58	68.2	92	81.4	177	79.0	.10
Size of community	68	80.0	97	85.6	172	76.8	.12
Climate or geographic features	49	57.6	81	71.7	115	51.3	.003
Recreational facilities	52	61.2	84	74.3	157	70.1	.15
Income	44	51.8	60	53.1	86	38.4	.008
Community recruitment effort	24	28.2	32	28.3	14	6.3	10 ⁻⁶
Recruitment by colleagues	42	49.4	51	45.1	120	53.6	.28
Medical need in area	47	55.3	61	54.0	48	21.4	10 ⁻⁶
Brought up in community	26	30.6	42	37.2	110	49.1	.007
Education system for children	21	24.7	34	30.0	113	50.4	.000004
Training in same size community	52	61.2	42	37.2	130	58.0	.0002
Cultural influences	15	17.6	20	17.7	87	38.8	.000006
Political environment	21	24.7	37	32.7	46	20.5	.07
Potential teaching opportunity	22	25.9	20	17.7	89	39.7	.00007
Incentive for loan repayment	10	11.8	12	10.6	3	1.3	.00009
Locum in similar community	40	47.1	44	38.9	86	38.4	.32

past 25 years. For the 1998-1999 academic year, 50.5% of applicants admitted to all Canadian faculties of medicine were female.¹⁴ Family medicine is the single most common career path of graduating Canadian physicians, and there is increasing evidence of the feminization of family medicine. For the 1998-1999 academic year, the proportion of female family medicine residents in Canada was 56.0%.¹⁴ Increasing numbers of female family physicians will probably create greater shortages of rural physicians in the future, as women are less likely to practise in rural areas.^{9,15,16}

In our study, rural family physicians identified a combination of professional, community, and personal reasons for choosing rural practice. This is contrary to the finding that physicians tend to choose rural practice because of personal, rather than professional, reasons.⁴ The differing results could be attributed to the different times when studies were conducted⁹ or to actual differences in motivating factors between

American and Canadian family physicians. Between 1991 and 1997, the student loan remission program and signing bonus of the Rural Physician Action Plan in Alberta could have accounted for the influence of financial incentives.^{17,18}

Contrary to other studies,^{7,8} Alberta family medicine graduates who had lived in rural communities until they were 18 years were no more likely to choose rural practice locations than those who had lived in metropolitan areas. It is possible that Alberta graduates are different from other Canadian family medicine graduates in this regard.

The study has some limitations. Cross-sectional surveys provide a snapshot at a particular time. The 10-year group of graduates had differing numbers of years since graduation; therefore, the findings could be biased by more data on career history being available from older physicians than from more recent graduates. The study instrument did not provide definitions for each of the

RESEARCH

.....

Location of family medicine graduates' practices

Table 4. Factors with a positive influence on practice location by physician sex

INFLUENTIAL FACTOR	MALE N = 229		FEMALE N = 202		P VALUE
	N	%	N	%	
Spousal influence	146	63.8	143	70.8	.20
Type of practice	207	90.4	179	88.6	.28
Proximity to extended family	111	48.5	117	57.9	.09
Opportunity to join group practice	134	58.5	137	67.8	.08
Working hours required for practice	112	48.9	141	69.8	.00004
Professional opportunities	159	69.4	142	70.3	.98
Familiar with medical community and resources	107	46.7	149	73.8	10 ⁻⁶
Availability of support facilities and personnel	157	68.6	169	83.7	.0005
Size of community	180	78.6	155	76.7	.33
Climate or geographic features	139	60.7	102	50.5	.02
Recreational facilities	149	65.1	143	70.8	.35
Income	127	55.5	64	31.7	10 ⁻⁶
Community recruitment effort	45	19.7	27	13.4	.11
Recruitment by colleagues	109	47.6	106	52.5	.40
Medical need in area	103	45.0	56	27.7	.00003
Brought up in community	88	38.4	93	46.0	.19
Education system for children	99	43.2	69	34.2	.05
Undergraduate or resident training in similarly sized community	112	48.9	111	55.0	.28
Cultural influences	59	25.8	62	30.7	.28
Political environment	56	24.5	48	23.8	.94
Potential teaching opportunity	58	25.3	72	35.6	.04
Incentive for loan repayment	17	7.4	9	4.5	.27
Locum in similar community	78	34.1	89	44.1	.06

23 factors; therefore, each respondent could have interpreted the factors differently. Recall bias also could exist, as graduates were asked to assess the effect of factors on career events that, for some graduates, occurred 10 to 11 years ago. The study sample consisted of relatively recent family medicine graduates who had been in practice for up to 11 years at the time of the study. While findings might not be readily generalizable to all Alberta family physicians, they reflect the thoughts of younger family physicians who are most often the target of recruitment strategies aimed at attracting physicians to medically underserved areas.

Study findings have implications for physician recruitment strategies. The different preferences of men and women physicians should be taken into account, specifically, the importance of spousal influence, hours of work, and availability of support facilities and staff for female family physicians. Rural communities wishing to recruit female physicians should address employment opportunities for male spouses. Recruiting two female physicians

into a rural community could also provide each woman with some flexibility in work hours, as well as professional and personal support. During educational rotations, encouraging female students and residents to do rotations in rural areas will enable them to become more familiar with the medical resources in rural communities. In contrast, recruitment strategies aimed at male physicians could concentrate on type of practice and medical need in the area, as well as income. For both sexes, family issues must be taken into account. While financial incentives are not a great attraction for recruiting family medicine graduates in general, they are influential for some who choose rural practice. Further research is required into factors that influence the retention of Canadian family physicians in rural areas.

CONCLUSION

This study reports how differences in sex influence family medicine graduates' choice of practice location.

Spousal influence, working hours, and familiarity with or availability of support resources and staff are important factors for women. Men are more influenced by type of practice, income, and high medical need in the area. These factors should be considered in recruitment strategies. ❖

Acknowledgment

This study was supported by the Rural Physician Action Plan (Alberta Health), Grey Nuns Family Medicine Centre Research and Education Fund (Caritas), and the Department of Family Medicine Research Fund (University of Alberta). We are grateful to Wayne Woloschuk for assistance with development of the survey questionnaire. We offer special thanks to Maria Bachinski, Mirella Chiodo, and Carmen Frese for secretarial and data entry assistance. We also thank David Topps and Paul Humphries for their constructive comments in reviewing the manuscript.

Contributors

Ms Szafran conducted the data analysis, contributed to interpretation of study findings, and took primary responsibility for manuscript preparation. Dr Crutcher was responsible for study concept and design, managed mailing the questionnaire at the University of Calgary, and contributed to interpretation of study findings and manuscript preparation. Dr Chaytors helped to manage mailing the questionnaire at the University of Alberta, to interpret study findings, and to prepare the manuscript.

Competing interests

None declared

Correspondence to: Ms O. Szafran, Department of Family Medicine, 12—102 Clinical Sciences Bldg, University of Alberta, Edmonton, AB T6G 2G3; telephone (780) 492-8102; fax (780) 492-8191; e-mail Olga.Szafran@ualberta.ca

References

- Jennett P, Hunter KL. Career and practice profiles of Alberta medical graduates (1973-85) practising in Alberta. *Can Med Assoc J* 1988;139:625-8.
- Cooper JK, Heald K, Samuels M, Coleman S. Rural or urban practice: factors influencing the location decision of primary care physicians. *Inquiry* 1975;21(Mar):18-25.
- Costa AJ, Schrop SL, McCord G, Gillanders WR. To stay or not to stay: factors influencing family practice residents' choices of initial practice location. *Fam Med* 1996;28(3):214-9.
- Stamps PL, Kuriger FH. Location decisions of National Health Service Corps physicians. *Am J Public Health* 1983;73(8):906-8.
- Leonardson G, Lapierre R, Hollingsworth D. Factors predictive of physician location. *J Med Educ* 1985;60(Jan):37-43.
- Potter JM. Characteristics of Alaskan family physicians as determinants of practice location. *Alaska Med* 1995;37(2):49-52,79.
- Carter RG. The relation between personal characteristics of physicians and practice location in Manitoba. *Can Med Assoc J* 1987;136:366-8.
- Easterbrook M, Godwin M, Wilson R, Hodgetts G, Brown G, Pong R, et al. Rural background and clinical rural rotations during medical training: effect on practice location. *Can Med Assoc J* 1999;160:1159-63.
- Rosenthal TC, Rosenthal GI, Lucas CA. Factors in the physician practice location puzzle: a survey of New York State residency-trained family physicians. *J Am Board Fam Pract* 1992;5(3):265-73.

Editor's key points

- This survey of Alberta family physicians examines factors influencing practice location.
- The three most important factors, overall, were spousal influence, type of practice, and proximity to extended family.
- Male family practice graduates rated type of practice, income, medical need of the area, and climate or geographic features as most important.
- Female family practice graduates rated spousal influence, flexible working hours, familiarity with the medical community, and availability of support facilities most highly.

Points de repère du rédacteur

- Cette enquête auprès de médecins de famille en Alberta examinait les facteurs qui influençaient le choix du lieu de la pratique.
- Dans l'ensemble, les trois plus importants facteurs se situent dans l'influence du conjoint ou de la conjointe, le genre de pratique et la proximité des membres de la famille.
- Les diplômés praticiens de la médecine familiale accordaient une plus grande importance au genre de pratique, à la rémunération, aux besoins de services médicaux dans la région, au climat ou aux caractéristiques géographiques.
- Les diplômées praticiennes de la médecine familiale jugeaient plus importants dans ce choix l'influence de leur conjoint, les heures de travail flexibles, la familiarité avec le milieu médical et la disponibilité de services de soutien.

- Jarratt LG, Leonardson GR, Nord WJ. Practice location factors influencing South Dakota School of Medicine graduates (1977-85). *S D J Med* 1989;42(12):15-21.
- Canadian Medical Association. *Report of the Advisory Panel on the Provision of Medical Services to Underserved Regions*. Ottawa, Ont: Canadian Medical Association; 1992.
- Holmes JE, Miller DA. Factors affecting decisions on practice location. *J Med Educ* 1986;61(Sep):721-6.
- Yens DP, Hornsby JL. Attitudes of family practice residents' spouses toward practice location. *J Fam Pract* 1981;12(4):761-3.
- The Association of Canadian Medical Colleges. *Canadian medical education statistics*. Ottawa, Ont: The Association of Canadian Medical Colleges; 1999;21:92-156.
- West PA, Norris TE, Gore EJ, Baldwin L, Hart LG. The geographic and temporal patterns of residency-trained family physicians: University of Washington Family Practice Residency Network. *J Am Board Fam Pract* 1996;9(2):100-8.
- Xu G, Veloski JJ, Hojat M, Politzer RM, Rabinowitz HK, Rattner S. Factors influencing physicians' choices to practice in inner-city or rural areas [letter]. *Acad Med* 1997;72(12):1026.
- Wilson DR, Woodhead-Lyons SC, Moores DG. Alberta's Rural Physician Action Plan: an integrated approach to education, recruitment and retention. *Can Med Assoc J* 1998;158:351-5.
- Chaytors RG, Spooner GR. Training for rural family medicine: a cooperative venture of government, university, and community in Alberta. *Acad Med* 1998;73(7):739-42.

...