Physicians certified in family medicine

What are they doing 8 to 10 years later?

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ABSTRACT

OBJECTIVE To determine field of medicine and location of a cohort of physicians certified in family medicine between 1989 and 1991 and residing in Ontario in 1993 and to gather information on the scope of practice of family physicians in the cohort in 1999.

DESIGN Responses to a mailed questionnaire sent in 1999 were compared with responses to a 1993 survey of this group.

SETTING AND PARTICIPANTS All family physicians in Ontario in 1993 who received certification in 1989, 1990, or 1991 after completing a family medicine residency. Seven of 557 respondents to the 1993 survey were ineligible; 293 physicians (53%) responded to the 1999 survey.

MAIN OUTCOME MEASURES Field, location, and scope of practice.

RESULTS About 91% of the cohort were still practising family medicine, although 11% of these had restricted their practices to certain areas within family medicine. Physicians migrated from Ontario (6%) in nearly equal numbers to other provinces and other countries, predominantly the United States. More family physicians offered counseling, shared antenatal care, and newborn care in 1999 than in 1993. Those with restricted family practices provided fewer types of services and were less likely to provide antenatal or intrapartum care or to provide in-hospital services.

CONCLUSION Receiving certification in family medicine does not guarantee that physicians will remain in family practice 8 to 10 years later. Loss from general family medicine to restricted practices within family medicine and specialization was greater than loss from migration.

RÉSUMÉ

OBJECTIF Déterminer le domaine médical et le lieu de pratique d'une cohorte de médecins certifiés en médecine familiale entre 1989 et 1991, et résidant en Ontario en 1993, et recueillir des renseignements sur l'étendue de la pratique des médecins de la cohorte en 1999.

CONCEPTION Les réponses à un questionnaire envoyé par la poste en 1999 ont été comparées à celles d'un sondage réalisé auprès du même groupe en 1993.

CONTEXTE ET PARTICIPANTS Tous les médecins de famille en Ontario en 1993 qui ont reçu la certification en 1989, 1990 ou 1991 après avoir complété la résidence en médecine familiale. Sept des 557 répondants au sondage de 1993 n'étaient pas admissibles; 293 médecins (53%) ont répondu au sondage de 1999.

PRINCIPALES MESURES DES RÉSULTATS Le domaine, le lieu et l'étendue de la pratique.

RÉSULTATS Environ 91% de la cohorte pratiquaient toujours la médecine familiale, quoique 11% avaient restreint leur pratique à certains domaines de la médecine familiale. Les médecins ont émigré de l'Ontario (6%) à peu près en nombre égal vers d'autres provinces et d'autres pays, surtout aux États-Unis. Plus de médecins de famille offraient du counseling, des soins prénatals partagés et des soins aux nouveau-nés en 1999 qu'en 1993. Ceux et celles qui avaient restreint leur pratique familiale dispensaient un nombre moins grand de types de services et étaient moins susceptibles de fournir des soins prénatals ou intra-partum, ou des soins hospitaliers.

CONCLUSION La certification en médecine familiale ne garantit pas que les médecins demeureront en pratique familiale huit à 10 ans plus tard. La perte survenue pour la médecine familiale générale à la suite d'une pratique restreinte et d'une spécialisation était plus grande que celle attribuable à l'émigration.

This article has been peer reviewed.
Cet article a fait l'objet d'une évaluation externe.
Can Fam Physician 2001;47:1404-1410.

Periodic attempts have been made to project Canadian physician resource needs and adjust physicians' productivity.[1-4] The accuracy of these forecasts depends on the accuracy of projections about the future size of the Canadian population, the age-sex structure of the population, and the probable need for physicians' services. Accuracy also depends upon assumptions made about the number of physicians entering various fields of medicine and the productivity of these physicians.

Productivity is affected by such factors as the number of hours worked professionally, the age of retirement, and the rate of attrition from the human resource pool (influenced by migration, death, retirement, or leaving medicine).[5] Changes in the human resource pool also occur when family physicians restrict the scope of their practices or specialize by entering other fields of medicine. Also, it is important to know not only how many restrict or leave their practices, but when in the stage of physicians' careers such changes occur.

In 1964, a Royal Commission headed by Justice E. Hall predicted a shortfall of physicians, which led to the expansion of medical education capacity in Canada.[1] Some of the assumptions used, however—notably the projected rapid growth of Canadian population—proved to be in error, leading to concerns about oversupply.[6] The Barer-Stoddart report,[7] while pointing out that the "right" number of physicians per capita was a political judgment, not a fixed number, suggested that we should pay more attention to the professional "life cycle" of physicians.

Canada's Federal/Provincial/Territorial Ministers of Health agreed in 1992 that Canada was producing more physicians than its population needed and developed a plan entitled *Strategic Directions for Canadian Physician Resource Management*.[8] It called for a 10% cutback in Canadian medical school enrolment, which was implemented in 1993. Requirements for entering primary care practice were also changed in 1994 so that all provinces and territories would require a minimum of 2 years of postgraduate training. In 1997 postgraduate training positions were reduced to match the previous decrease in medical school enrolment.

Some medical groups expressed concern about these restrictions on career choice and the difficulty they create for physicians who wish to change their speciality.[9] Others voiced concern that the policy itself was flawed and would lead to shortages of physicians.[10-12] By 1999, many communities, including populous southern Ontario, expressed concern that they had or would soon have a shortage of primary care physicians.[13] This shortage is said to have existed even before the reduction in medical school enrolments seriously affected primary care physician supply. Clearly, other factors, not taken into account or underestimated in the latest physician resource management plans, have helped create the situation.

This paper describes the current activities of a cohort of physicians who received certification in family medicine in 1989, 1990, or 1991 after completing a family medicine residency. All were practising in Ontario in 1993. Changes since 1993 in these physicians' field, location, and scope of practice that could affect their availability to deliver primary care are described. Reasons for leaving family medicine are reported for those who made this choice and for those who are seriously considering it.

METHODS

Cohort identification and location

With the assistance of the College of Family Physicians of Canada (CFPC), the cohort of physicians studied was first identified in 1993. To be eligible, physicians had to be certified in family medicine (CCFP) by the CFPC after completing a residency program in family medicine between 1989 and 1991, and to reside in Ontario in 1993. When these physicians were surveyed in 1993, 70% responded. Both the 1993 study and the current study were approved by the Committee for Ethics for Research in McMaster University's Faculty of Health Sciences.

In 1998, we attempted to locate all physicians who were in the original cohort using on-line sources, such as the College of Physicians and Surgeons of Ontario's Find a Doctor webpage or CFPC records, most current addresses listed in the *Canadian Medical Directory*, and correspondence with other licensing bodies across North America. A copy of our 1993 report on this cohort was mailed to each person at his or her last known address. A few letters were returned, leading to a further address search through provincial and state licensing bodies. During this process, six physicians were declared ineligible, as they had not obtained certification through the residency-eligible route. We discovered that one person not found in 1993 had left the province before 1993 and was also ineligible.

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Table 1. Sociodemographic description of respondents

RESPONDENT CHARACTERISTICS	MALE		FEMALE		TOTAL	
	N	%	N	%	N	%
Sex*	126	43.2	166	56.7	292	100.0
Marital status						
• Single	11	8.8	14	8.6	25	8.7
• Married	114	91.2	139	85.3	253	87.9
• Other†	–	–	10	6.1	10	3.5
Number of children in household						
• None	27	21.6	38	23.3	65	22.6
• 1	12	9.6	25	15.3	37	12.8
• 2	46	36.8	60	36.8	106	36.8
• 3 or more	40	32.0	40	24.5	80	27.8
Nature of spouse's work‡						
• Physician	22	24.2	40	27.8	62	26.4
• Other health professional	19	20.9	4	2.8	23	9.8
• Other profession	32	35.2	67	46.5	99	42.1
• Other occupation	18	19.8	33	22.9	51	21.7
Medical area						
• General family	103	1.7	132	9.5	235	80.5
• Restricted practice	10	7.9	21	12.7	31	10.6
• Specialist	10	7.9	13	7.8	23	7.9
• Left medicine	38	2.4	–7	–	3	1.0
Type of practice§						
• Group	63	55.8	95	62.1	158	59.4
• Solo	32	28.3	24	15.7	56	21.1
• Health Service Organization/ Community Health Centre	11	9.7	18	11.8	29	10.9
• Other	7	6.2	16	10.4	23	8.6

**Unknown for one respondent. †Separated, divorced, or widowed. ‡$\chi^2_3 = 20.9$; $P < .001$. §Family physicians only.*

Survey implementation

In January 1999 members of the cohort received letters and questionnaires asking for an update on their activities. We specifically invited *all* cohort members to participate, whether or not they were still in Ontario or practising family medicine. This mailing was followed by a thank-you reminder and two subsequent mailings to continuing nonresponders. Nonresponders in Ontario also received a telephone reminder. Again, a few questionnaires were returned and renewed attempts were made to locate these physicians through family members and licensing bodies.

Questionnaire

The questionnaire began by asking physicians to identify whether they were currently practising general family medicine, were engaged in a restricted practice within family medicine, were practising or in residency training for another specialty, or had left medicine permanently. Physicians were directed to subsequent questions based on their current status. Thus, family physicians (whether or not they had restricted their practices) answered questions about their practices, changes they had made, and the effects of health policy changes on them. They were asked whether they had seriously thought of switching to another area and their reasons for making such a switch. Specialists, residents preparing to be specialists, and those who left medicine were asked about the reasons for their decisions. Everyone was asked to provide basic sociodemographic information and to answer some attitudinal questions related to health care policies and health care reform.

Most of the questions used in the survey had been asked previously. A small test-retest reliability study was done with the first 50 respondents to check the performance of new questions.

Analytic strategy

Reliability of new items was checked using κ statistic and Pearson *r* to look at the extent of agreement. Agreement of responses more than 2 weeks later was high, with correlations often at .9 or better and κ statistics of .6 or more. The survey data file was audited. Descriptive statistics were used as appropriate. For comparison of 1993 and 1999 responses, paired *t* tests and repeated measures analysis of variance were used. Given the number of associations examined, we chose $P \leq .01$ as the level for reporting findings as significant. Findings of associations reported between $P = .05$ and $P > .01$ were considered interesting.

RESULTS

Response rate

Seven physicians thought to be part of the cohort in 1993 were found to be ineligible, which reduced the size of the cohort studied to 557. Of these, two had died, and 293 responded to the survey in 1999, a response rate of 53%. One respondent's questionnaire lacked identifying information to allow linkage to previous data (**Table 1**).

No differences were seen between 1999 respondents and nonrespondents in sex, location in 1999, year of certification, or medical school of graduation. However, 85% of 1999 respondents had also responded to the 1993 survey; nonrespondents in 1993 were less likely to respond in 1999.

Current status in medicine

Nearly all (267, or 91%) respondents were still practising family medicine in 1999. Of these, 31 (12%) had chosen to restrict their practices within family medicine to such areas as sports medicine, emergency medicine, geriatrics, counseling, and psychotherapy. Twenty-three (8%) had entered specialties. Ten specialties were represented among their choices; psychiatry (9, 39%) and emergency medicine (4, 17%) were most often chosen. Many of those entering specialties (12, 52%) indicated that the ability to secure a residency slot in another specialty was an important influence on their decision. Three had left medicine and had chosen to work in a field where their medical training would be of value.

Family physicians currently practising were asked whether, in the past 2 years, they had seriously considered entering another field of medicine or restricting their practices to certain areas within family medicine. Of those practising general family medicine, 23 (10%) had considered a narrow focus within family medicine and 11 (5%) had considered entering another medical field. Among those already restricting their practices within family medicine, significantly more (8, 26%) had seriously considered entering another medical field ($\chi^2_2 = 44.0$, $P < .001$). Two reasons were endorsed by more than half the family physicians considering a change toward more specialized practice: more personal time (29, 62%) and dislike of government policies related to primary care (36, 53%).

Location

Location of the cohort was examined in two ways. First, we examined all members' 1999 addresses. Of these, 491 (89%) remained in Ontario, 30 (5%) were in another part of Canada, 28 (5%) were in the United States, and the remaining six (1%) were elsewhere. Then we looked at addresses of respondents to the 1999 survey: 257 (88%) were in Ontario, 17 (6%) had moved to another part of Canada, 17 (6%) had moved to the United States, while one had moved elsewhere. Of those outside Canada, 16 (89%) were family physicians, one had specialized, and one had left medical practice.

Services

In both 1993 and 1999, respondents reported whether they had included a set of services as part of their practice as family physicians (**Table 2**). Only those who indicated that they had *general* family practices in 1999 were included in this analysis. Two thirds or more of general family physicians included counseling, newborn care, psychotherapy, postpartum care, minor surgery, and supportive hospital care in their practices in 1999. Counseling, shared antenatal care, and newborn care were provided more often in 1999 than in 1993. Complete antenatal care, including uncomplicated deliveries, had decreased significantly. Fourteen percent of general family physicians offered neither antenatal nor intrapartum care in 1999, compared with 16% in 1993. Although more than half the physicians provided concurrent, supportive, or active care to hospital patients, 16% indicated that they provided none of these services.

The 11 services listed in **Table 2** can be grouped into eight types of service if all services to hospitalized patients are considered one service type, and if antenatal and intrapartum services are grouped into services for pregnant women. We examined the extent to which these eight different types of services were offered by family physicians. Family physicians who had chosen to restrict their practices within family medicine provided far fewer types of services to their patients (mean = 2.2; SD = 2.0) than general family physicians (mean = 6.4; SD = 1.6; $t = 178.2$, $P < .001$). Fourteen percent of general family physicians were not involved

Table 2. Frequency of general family physicians' delivery of 11 services in 1999 by sex compared with frequency of delivery in 1993

SERVICES DELIVERED	N	PAIRED DATA 1993 %	1999 %	*P* VALUE
COUNSELING*				*≤01
• Male	90	88.9	96.7	
• Female	103	91.3	98.1	
• TOTAL	193	90.1	97.4	
MINOR SURGERY†				
• Male	90	83.3	82.2	
• Female	103	75.7	68.0	
• TOTAL	193	79.3	74.6	
PSYCHOTHERAPY				
• Male	90	82.2	88.9	
• Female	103	84.4	82.5	
• TOTAL	193	83.4	85.5	
NEWBORN CARE‡				.02
• Male	90	87.8	92.2	
• Female	103	82.5	92.2	
• TOTAL	193	85.0	92.2	
POSTPARTUM CARE				
• Male	90	82.2	84.4	
• Female	103	80.6	90.3	
• TOTAL	193	81.3	87.6	
SURGICAL ASSISTS§				
• Male	90	57.8	55.6	
• Female	103	46.6	48.5	
• TOTAL	193	51.8	51.8	
CARE OF PREGNANT WOMEN				≤.01
Shared antenatal care*				
• Male	90	56.7	67.8	
• Female	103	44.7	64.1	
• TOTAL	193	50.3	65.8	
Complete antenatal care including uncomplicated deliveries‖				≤.01
• Male	90	42.2	28.9	
• Female	103	45.6	32.0	
• TOTAL	193	44.0	30.6	
CARE OF HOSPITALIZED PATIENTS				
Active care	90	65.6	62.2	
• Male	103	56.3	57.3	
• Female	193	60.6	59.6	
• TOTAL				
Supportive care				
• Male	90	77.8	70.0	
• Female	103	72.8	68.0	
• TOTAL	193	75.1	68.9	
Concurrent care				
• Male	90	60.0	62.2	
• Female	103	53.4	55.3	
• TOTAL	193	56.5	58.6	

**Increased significantly between 1993 and 1999 (P ≤ .01).*
†Female physicians were significantly (P ≤ .01) less likely to provide this service in both 1993 and 1999.
‡Increased interestingly between 1993 and 1999 (P =.02).
§Female physicians were interestingly less likely to provide this service in both 1993 and 1999.
‖Decreased significantly between 1993 and 1999 (P ≤ .01).

in care of pregnant women compared with more than 20% of all family physicians. Similarly, only 16% of general family physicians did not see hospitalized patients, while 23% of all family physicians did not see hospitalized patients.

DISCUSSION

If the behaviour of this cohort of physicians who were certified in family medicine 8 to 10 years ago is at all typical, CFPC certification does not mean that all such physicians will remain primary care physicians. Already attrition from general family medicine through restricting practices and specialization is larger than loss due to emigration. Because we could find no data that would allow us to estimate these types of losses from a typical cohort of family physicians, it is hard to tell whether the number of physicians who have made such changes (19%) or are contemplating them (21%) is particularly high among our study physicians for this stage of their careers or not. It is worrisome that, among those who were certified in family medicine 8 to 10 years ago, nearly 39% have very restricted practices, have become specialists, or are considering a change of field, and another 1% are contemplating leaving medicine (or have left) entirely.

Availability of a residency position was an important factor for entering a specialty. Fewer residency positions are now available.[8] This factor could limit the ability of primary care physicians to become certified specialists, but not to narrow their scope of practice. It could also cause some to seek specialty training in the United States, where more residency posts are available.

Although the number of CCFP physicians involved in primary care decreased, the remaining general family physicians continued to provide a range of services. Although not all of these physicians provide a comprehensive set of services to patients, more than 70% worked in some form of group practice. Groups can deliver comprehensive care while individual physicians within groups offer a more limited range of services depending on their interests and abilities.

Thurber and Busing[14] note that, with the elimination of rotating internships as an entry point into general practice and the subsequent general reduction in residency posts, fewer physicians now enter primary care medicine. These authors suggest the reliance on primary care physicians as gatekeepers to the Canadian health care system and the main providers of primary care will need to change, as only 40% of new physicians produced since the mid-1990s have entered primary care. Our study suggests that, as a cohort of family physicians ages, attrition from primary care for several reasons further reduces their number. If specialists do not leave their practices to become family physicians, the current imbalance between primary care and specialty care will increase.

Whitcomb[15] points out that the United States has increasingly used nonphysician providers (nurse practitioners and physician assistants) to deliver primary care, particularly in the context of managed-care organizations. This is also a policy option for the Canadian health care system. However, it is one that has not been widely debated. Substantial support for such an option is not currently apparent among either physicians or the general public. Given the length of time needed to train primary care physicians (2 years after receiving a medical degree), this policy option needs to be highlighted for everyone if planning rather than expediency is to be used to drive the policy agenda.

Recommendations regarding the reform of primary care[16-18] have led to new models for primary care delivery. Physicians would work in virtual (electronically linked) groups of seven to 30 members with an array of other health professionals, including nurse practitioners, to meet the primary health care needs of defined populations. For this concept to work, patients would need to accept that it is unnecessary to rely on the same physician, or indeed a physician, for all primary care services and be willing to stay with the same group for a stipulated period. Physicians would also need to be comfortable with working in multidisciplinary teams using information technology and funding arrangements different from the predominant fee-for-service model. The changes described in these proposals require considerable discussion and education of all major stakeholders. Otherwise, the shortage of family physicians will continue and will not be confined to remote and rural areas and small towns that have traditionally had difficulty attracting and retaining family physicians.

Although we were able to locate all of the 1993 cohort members, we received responses from only 53% of them, and women were slightly overrepresented among respondents. Data comparing cohort members' practices across time rely on the nearly 85% of 1993 respondents who responded in 1999. Thus, those who participated in the earlier survey were overrepresented in the respondent pool. However, no differences in location or likelihood to have entered another medical speciality were observed for respondents and nonrespondents, providing greater confidence that the more detailed data available for respondents are representative of the cohort.

Editor's key points

- This 1999 survey replicates a 1993 survey and describes changes in practice location and scope of practice among a cohort of family physicians in Ontario.
- About 90% of this cohort were still practising family medicine, although 11% had restricted their practices to certain areas within family medicine.
- More physicians offered counseling, shared antenatal care, and newborn care in 1999; fewer offered intrapartum care.
- Attrition due to moves to other practice locations, restricted practices, and specialization means reduced "productivity" for a cohort of family physicians. Human resource planners, please note.

Points de repère du rédacteur

- Le sondage de 1999 était une réplique de celui administré en 1993 et décrivait les changements dans le lieu et l'étendue de la pratique au sein d'une cohorte de médecins en Ontario.
- Environ 90% des médecins de la cohorte pratiquaient toujours la médecine familiale, mais 11% avaient restreint leur pratique à certains domaines de la médecine familiale.
- Plus de médecins offraient du counseling, des soins prénatals partagés et des soins aux nouveau-nés en 1999; ils étaient moins nombreux à dispenser des soins intra-partum.
- L'attrition en raison du déplacement du lieu de pratique, de la pratique restreinte et de la spécialisation se traduit par une «productivité» réduite dans une cohorte de médecins de famille. Avis aux planificateurs de l'effectif médical.

CONCLUSION

Debate over the appropriate number of primary care physicians for Canada,[19] whether we are in a position of physician oversupply or undersupply,[20-22] and the meaning of current trends for the future supply of primary care physicians and the organization and delivery of primary care in Canada will continue. Receiving certification in family medicine does not guarantee that physicians trained to deliver primary care will remain in general family practice. This finding has implications for human resource planning for delivery of primary care in Canada.

Acknowledgment

We thank the physicians who participated in this study. This research was funded by Health Canada's National Health Research and Development Program and the Social Sciences Humanities Research Council of Canada.

Contributors

Drs Woodward, Cohen, *and* **Ferrier** *conceived the research on which this paper is based. All authors helped to produce this paper. Primary responsibility for writing the paper fell to* **Dr Woodward**; *the other authors reviewed drafts of the paper, made suggestions on its content, and reviewed the final draft before it was sent for publication.*

Competing interests

None declared

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References

1. Royal Commission on Health Services. *Medical manpower in Canada*. Vol 1. Ottawa, Ont: Government of Canada; 1964. Catalog No. Z1-1961/3-1.
2. Hall EM. *Canada's national-provincial health program for the 1980's. A commitment for renewal*. Ottawa, Ont: Government of Canada; 1980.
3. Federal/Provincial/Territorial Advisory Committee on Health Manpower. *Physician manpower in Canada 1980-2000.* Ottawa, Ont: Department of National Health and Welfare; 1984.
4. Lomas J, Stoddart GL, Barer ML. Supply projections as planning: a critical review of forecasting net physician requirements in Canada. *Soc Sci Med* 1985;20(4):411-24.
5. Woods D. The alleged MD surplus: need for superb data, national policy. *Can Med Assoc J* 1983;129:1171.
6. Adams O. Canada one country among many grappling with MD-oversupply issue. *Can Med Assoc J* 1989;140:68-9.
7. Stoddart GL, Barer ML. Toward integrated medical resource policies for Canada. 2. Promoting change—general themes. *Can Med Assoc J* 1992;146:697-700.
8. Federal/Provincial/Territorial Ministers of Health of Canada. *Strategic directions for Canadian physician resource management*. Communique issued in Banff, Alta. Ottawa, Ont: Department of National Health and Welfare; January 28, 1992.
9. Dauphinee WD. Changes in career plans during medical training and practice: it's time to look ahead and act. *Can Med Assoc J* 1996;154:1049-52.
10. Association of Canadian Medical Colleges. Should Canadian faculties of medicine reduce the number of places for the study of medicine? *ACMC Forum* 1991-92;25(1,2):1-31.
11. Rosser WW, Moore C, Forster JM, Hennen B, McAuley R, Wilson R. *Is an acute shortage of family doctors possible in Ontario in 1996?* Department of Family and Community Medicine Newsletter. Toronto, Ont: University of Toronto; 1995;14(1):1-4.
12. Dauphinee WD. Medical workforce policy making in Canada: are we creating more problems for the future? *Clin Invest Med* 1996;19(4):286-91.
13. Sibbald B. Southern Ontario towns hand out MD-wanted sign. *Can Med Assoc J* 1998;159:1292.
14. Thurber AD, Busing N. Decreasing supply of family physicians and general practitioners. Serious implications for the future. *Can Fam Physician* 1999;45:2084-9.
15. Whitcomb M. Family medicine in Canada. Where have all the physicians gone? [editorial]. *Can Fam Physician* 1999;45:2015-6 (Eng), 2025-7 (Fr).
16. Health Services Restructuring Commission (HSRC). *Primary health care strategy.* Toronto, Ont: HSRC; 1999.
17. Ontario College of Family Physicians. *Family medicine in the 21st century: a prescription for excellent healthcare.* Toronto, Ont: Ontario College of Family Physicians; 1999. Available at: **http://www.cfpc.ca/ocfp/commun/publitns.html**. Accessed 2001 May 16.
18. Sibbald B. Is fee-for-service on the way out for Ontario FPs? *Can Med Assoc J* 1999;161:861-3.
19. Roos NP, Bradley JE, Fransoo R, Shanahan M. How many physicians does Canada need to care for our aging population? *Can Med Assoc J* 1998;158:1275-84.
20. Evans RG. New bottle, same old wine: right and wrong in physician supply. *Can Med Assoc J* 1998;158:757-9.
21. Ryten E, Thurber DA, Buske L. The class of 1989 and physician supply in Canada. *Can Med Assoc J* 1998;158:723-8.
22. Stoddart GL, Barer ML. Will increasing medical school enrolment solve Canada's physician supply problems? *Can Med Assoc J* 1999;161:983-4.

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