What do they contribute?

Family medicine residents who practise in cities

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ABSTRACT

OBJECTIVE To determine how a cohort of family practice residents graduating between 1990 and 1997 was serving the needs of urban populations in British Columbia.

DESIGN Survey using mailed questionnaire.

SETTING British Columbia.

PARTICIPANTS All graduates of the British Columbia family practice residency program between 1990 and 1997.

MAIN OUTCOME MEASURES Graduates who were currently practising as family physicians and providing medical care to urban and inner-city populations of more than 100 000, sex, practice profiles, and a comparison with Janus Project data for British Columbia.

RESULTS Of 287 graduates surveyed, 206 responded (71.8%). Less than half (86) identified themselves as practising in urban settings; 61 of those were practising as family physicians. These physicians offered a range of primary care services; many offered inpatient and obstetric care. In addition, many were offering care to disadvantaged inner-city populations with unique and challenging medical problems.

CONCLUSION Recent graduates in family medicine practising in urban and inner-city areas are offering full-service primary care and are not abandoning it for more episodic high-volume medical practice.

RÉSUMÉ

OBJECTIF Établir comment une cohorte de résidents diplômés de médecine familiale entre 1990 et 1997 répondent maintenant aux besoins des populations urbaines en Colombie-Britannique.

TYPE D'ÉTUDE Enquête (questionnaire) par la poste.

CONTEXTE Colombie-Britannique.

PARTICIPANTS Tous les diplômés du programme de résidence en médecine familiale de Colombie-Britannique.

PRINCIPAUX PARAMÈTRES ÉTUDIÉS Les diplômés pratiquant activement la médecine familiale et prodiguant des soins dans des villes ou des quartiers défavorisés de plus de 100 000 habitants, leur sexe, leur profil de pratique; comparaison des données avec celles du Projet Janus pour la Colombie-Britannique.

RÉSULTATS Des 287 diplômés interrogés, 206 ont répondu (71,8%). Moins de la moitié (86) déclaraient pratiquer en milieu urbain, dont 61 comme médecins de famille. Ces médecins offraient un variété de soins de première ligne, plusieurs ayant une pratique hospitalière et obstétricale. De plus, plusieurs traitaient des patients des quartiers défavorisés présentant des problèmes de santé uniques et complexes.

CONCLUSION Les diplômés récents de médecine familiale œuvrant en milieu urbain et dans les quartiers défavorisés offrent une gamme complète de soins de première ligne et n'abandonnent pas leur poste pour une pratique plus rémunératrice et moins exigeante.

This article has been peer reviewed.
Cet article a fait l'objet d'une évaluation externe.
Can Fam Physician 2003;49:337-341.

How a shortage of physicians in Canada affects the health care system's ability to deliver appropriate and timely medical care is debated vigorously. More than half of Canada's physicians practise primary care. While much interest has recently focused on how effectively training programs prepare family medicine residents for practice in rural areas of Canada, 70% to 80% of Canadians live in urban areas.

With Health Canada's call for changes in approach to improving the health of Canadians,[1] academic training programs have been asked to respond to the health care needs of populations recognized as being underserviced.[2,3] Within family medicine, this response has focused primarily on the needs of rural communities, with suggestions to modify existing family practice residencies and increase training at rural sites.[4-10] Tracking residents who locate in rural areas, identifying factors predicting practice in rural areas,[11-14] and determining how family practice residency programs contribute to the rural physician pool[15,16] have been reported extensively in the literature.

Concerns about urban family medicine in Canada focus more on its apparently decreasing scope as fewer physicians include in-hospital care and intrapartum obstetrics in their practices.[17] Primary care reform proposals include plans to encourage practitioners to practise in clinics or groups that ensure patients in urban areas have access to all primary care services through one network or at one site.[18]

But how do the graduates of family practice residencies contribute to the health care of those living in urban areas? We know much less about the characteristics of graduates who practise in urban areas or their contribution to the health of the populations they serve than we do about graduates practising in rural areas. A literature search using MeSH headings (family physicians, urban, and recent graduates), designed to explore the nature of urban family practice in Canada and the role of recent graduates, turned up 10 papers. These papers explore how family practice has changed over the years[19-21]; differences between urban and rural practice[22-25]; and specific areas of practice, such as obstetrics, procedural skills, and counseling in urban practice.[26-28]

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We were interested in exploring and describing the practice profiles of family practice residents who chose, upon completion of training, to practise in inner-city or urban settings and the contribution a family residency program can make to the care of Canadians living in cities.

METHODS

The Family Practice Residency program at the University of British Columbia (UBC) has six different locations: one northern regional, one rural, one small town, and three urban. Residents normally complete the 2 years of training at one site. Training is primarily community-based, using preceptors from community practices. Outcomes of the rural stream of training have been tracked over several years.[29] Many family practice residency programs across Canada are similar in that they use different sites for training and community-based programs.

The survey sample included all residents graduating from the UBC family practice program from all sites of training between 1990 and 1997. These graduates completed their undergraduate medical degrees in Canada, the United States, and other countries, but completed all 2 years of their postgraduate training at UBC sites. A survey was constructed from previously validated survey questionnaires. It was further validated by pilot-testing with graduating residents.

Graduates were surveyed by mail in the summer of 1998, with two repeat mailings to nonrespondents; 21 graduates could not be located. Respondents were asked to identify their location of practice: inner city, urban, suburban, small town, or rural. Data were collected through self-report of types of practice, of percentage of time in each type of practice, of professional activities engaged in, and of percentage of time spent in each professional activity.

Respondents were asked about scope of practice: 23 areas of clinical practice were defined, and respondents were asked to identify amount of activity in each area on a four-point Likert scale: never, rarely, sometimes, frequently. An individual profile of the total amount of time spent in each area of clinical practice was generated for each respondent to reflect overall scope of practice. Using these individual profiles, a measure reflecting the scope of practice of the cohort was derived and compared with the scope of practice for other similar cohorts. Statistical significance was determined using a two-sample *t* test.

Respondents identified whether they had an area of special interest in family medicine and whether

other family physicians referred patients to them in their area of special interest. Finally, all survey respondents were asked an open-ended question, "How does your community benefit from your professional work?" Replies were analyzed through a qualitative process to develop an appreciation of common themes in the responses.

This study received approval from the UBC Ethics Review Committee.

RESULTS

Surveys were sent to 287 former residents; rate of return was 71.8%. Of 206 returned surveys, 86 respondents claimed they were practising in urban or inner-city areas and confirmed this claim by stating that they were practising in communities of more than 100 000. Respondents who said they were practising in suburban communities or in urban communities of less than 100 000 were not included in the sample.

Of the 86 respondents, 12 were practising full-time emergency medicine with CCFP(EM); 12 were in Royal College specialist programs or similar training; and one was no longer practising medicine, leaving a total of 61 eligible subjects. Of these 61 respondents, about one third were male and two thirds were female. Respondents were evenly distributed across all years of graduation from the program. Respondents had completed training in all training sites in the UBC program except the northern site; 74% were from the two Vancouver city-based sites of training.

Of respondents' total practice time, 15% was spent in community-based teams, hospital-based teams, and non–fee-for-service family practice settings; 75% was spent in solo or group fee-for-service practice. Although 30% of respondents spent some time in walk-in clinics, the total percentage of time spent in these clinics was 10%. While 13% of respondents spent time in teaching, administration, and research, these activities contributed only 3% to total professional time, with 97% of professional time spent in clinical work.

The 23 areas of clinical activity are listed and respondents' reporting of their level of activity in each area is compared with Janus Project data for British Columbia in **Table 1**. When the mean derived individual scope of practice for respondents who practised in urban areas was compared with the mean derived individual scope of practice for respondents who practised in other settings, there was no statistical difference ($P = .71$), although actual areas of clinical practice varied. Rural respondents had the highest standard deviation in derived individual scope of practice scores; urban respondents had a lower standard deviation.

Table 1. Scope of practice of graduates based in urban areas compared with Janus Project data for the whole of British Columbia

AREA OF PRACTICE	URBAN N=61	URBAN %	JANUS %
Adult health care	60	98	91
Adolescent health	59	97	88
Mental health	59	97	83
Preventive medicine	59	97	85
Chronic disease	58	95	83
Child health care	57	93	88
Sports medicine	55	90	69
Care of the elderly	54	88	91
Minor surgery	47	77	82
Obstetric care*	43	70	73
Addiction medicine	42	69	72
In-hospital care	41	67	25
Immigrant health	36	59	53
Aboriginal health	34	55	71
Palliative care	33	54	79
Emergency medicine	31	51	69
Occupational medicine	27	45	57
HIV and AIDS care	27	45	61
Surgical assists	26	42	–
Nursing home visits	14	23	71
Anesthesia	7	12	40
Surgical procedures	5	8	39
Other	4	7	7

**Obstetric care: 53% full care including deliveries; 47% prenatal and postnatal care only.*

Table 2. Areas of special interest

SPECIAL-INTEREST AREA*	RESPONDENTS (%)
Obstetrics	31
Sports medicine	25
Counseling and family therapy	21
Psychiatry	19
Other	40

**Respondents could choose more than one special-interest area.*

Fifty-two of the 61 respondents (85%) indicated a special interest within family medicine; of these, 52 (48%) are consulted by colleagues (**Table 2**). The 40% who listed "other" as their area of special interest

had wide-ranging interests, although addiction medicine, adolescent medicine, HIV medicine, and Native health care were all identified more than once.

Forty of the 61 respondents answered the open-ended question, "How does your community benefit from your professional work?" Although responses were not rich or detailed enough for qualitative analysis, they can be grouped into categories.

Eleven (25%) commented on providing patient-centred, high-quality, or comprehensive care: "[I] provide 24-hour coverage of our patients. …" "[I] provide health care for my patient population both in the office and [in] the hospital. …"

Eleven (25%) commented on special or enhanced skills they brought to their community: "[My] special interest in psychiatry helps my patients and the community [where] I do mental health work. …" "[I offer] palliative care consultation. …"

Fourteen (35%) stated they deliver care to people in the urban population who have difficulty accessing health care: "[I] work a lot with street-involved patients and mentally ill [patients]. …" "[I]nner-city [practices require a] unique skill set. …" "I provide care for subsets of the population who may have difficulty accessing health care (eg, frail elderly, mental health patients, gays and lesbians). …" "[I] take referrals from mental health teams of patients hard to find GPs for." Eleven identified other benefits.

DISCUSSION

Although the sample is small, the data in this study suggest that recently trained family practice residents who practise in cities have a broad and well-defined scope of practice specific to family medicine in urban settings. The data do not support suggestions that recently graduated residents have a reduced scope of family practice in cities.

There is a widely held perception that many of the more recently graduated residents are working exclusively in walk-in clinics or have high-volume practices. While 30% of respondents said they spend some of their professional time in such clinics, our data indicate that the total time in clinics amounts to a mere 10%.

The fact that 67% of our respondents provided in-hospital care and 70% were involved in obstetric care also disproves the perception that recently trained family practice residents providing care in cities are abandoning traditional roles as medical care providers. These figures are in line with the National Family Medicine Resident Survey 2000, which indicated that 76.4% of family practice residents intended to provide obstetric care.[30]

The many respondents who continue to care for their patients in hospital could well reflect the level of comfort residents have acquired while training on the family practice teaching ward. It certainly contrasts with Janus Project figures, which indicate that many family physicians are ceasing to see their hospitalized patients.

Respondents' development of areas of special interest fits well with primary care reform strategies espoused by the College of Family Physicians of Canada. Many of these family physicians care for "invisible" cohorts of patients who have difficulty accessing care in urban areas, but form large enough groups for physicians to centre their practices on them. Provision of care to these underserviced patient populations can go unnoticed and unreported in questionnaires focused primarily on a traditional scope of practice.

Limitations

Data presented are from a small sample of residents who all completed residency in the same program, so generalization of the study could be limited. The literature suggests that experiences and milieu of training influence graduates' decisions about practice. Rapidly changing patterns of practice could also mean that these data no longer reflect the situation in 2003. However, all of these graduates received their training in the past 11 years and continue to practise in BC cities.

The focus of one training site on issues of inner-city medicine; the presence of one of the very few family medicine teaching wards in a tertiary care hospital in Canada, and the strong clinical practice experience in this training program could all influence outcomes. Respondents to this survey had to identify themselves as practising in urban rather than suburban areas to be included, so that no data on activities of former residents in suburban areas are presented. While the scope of practice of former residents practising in urban areas appears as broad as that of former residents practising in other settings, intensity of practice or complexity of clinical area was not measured. As well, there is an implicit assumption that skill and expertise in such areas as substance abuse are as important for family physicians as the ability to manage a hospitalized patient with pneumonia.

Conclusion

Family practice residency programs in Canada train residents to meet society's needs. Reduced access to family physicians for rural populations because of

inequitable distribution of manpower resources has led to increased calls for training programs focused on rural practice. Most (80%) Canadians live in urban areas, however, and clearly our respondents make an important contribution to the care of urban populations who have difficulty accessing health services.

Acknowledgment

We acknowledge the advice and encouragement of the Scholarly Writers' Group in the Department of Family Practice at the University of British Columbia in Vancouver.

Contributors

Dr Bates *initiated and designed the study, gathered and helped analyze the data, and reviewed the literature.* **Dr Andrew** *reviewed the literature and helped analyze the data. Both authors contributed to writing the article, helped rewrite it after critical review, and approved the final version and its conclusions.*

Competing interests

None declared

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Editor's key points

- This survey examined the scope of practice of recent graduates from the University of British Columbia's family medicine program who were working in urban settings.
- Contrary to conventional thinking, most were involved in a broad spectrum of care including hospital work and obstetrics.
- In addition, many had developed special areas of expertise, such as counseling, HIV, and obstetrics, where they were consulted by colleagues.
- Many respondents had sought out disadvantaged populations and were providing extraordinary care to them.

Points de repère du rédacteur

- Cette enquête examinait les champs de pratique des diplômés récents du programme de médecine familiale de Colombie Britannique qui pratiquaient en milieu urbain.
- Contrairement à l'opinion courante, la plupart offraient une large variété de soins, incluant une pratique hospitalière et obstétricale.
- Plusieurs avaient en outre développé des domaines d'expertise spéciaux, tels que l'assistance socio-psychologique, le sida et l'obstétrique, pour lesquels ils étaient consultés par leurs collègues.
- De nombreux répondants avaient ciblé des milieux défavorisées, y prodiguant des soins exemplaires.

References

1. Health Canada. *Toward a healthy future: 2nd report on the health of Canadians*. Executive summary. Ottawa, Ont: Health Canada; 1999.
2. Boelen C. Prospects for change in medical education in the twenty-first century. *Acad Med* 1995;70:S21-S28.
3. Foreman S. Social responsibility and the academic medical center: building community-based systems for the nation's health. *Acad Med* 1994;69:97-102.
4. Whiteside C, Mathias R. Training for rural practice. Are graduates of a UBC program well prepared? *Can Fam Physician* 1996;42:1113-21.
5. Bowman RC, Penrod JD. Family practice residency programs and the graduation of rural family physicians. *Fam Med* 1998;30:288-92.
6. Chators RG, Spooner GR. Training for rural family medicine: a cooperative venture of government, university and community in Alberta. *Acad Med* 1998;73:739-42.
7. Godwin M, Lailey J, Miller R, Moores D, Parsons E. Physician supply in rural Canada. Can urban medical schools produce rural physicians? [editorial]. *Can Fam Physician* 1996;42:1641-4 (Eng), 1653-6 (Fr).
8. Moores DG, Woodhead-Lyons SC, Wilson DR. Preparing for rural practice. Enhancing experience for medical students and residents. *Can Fam Physician* 1998;44:1045-50.
9. Rourke JTB. Postgraduate training for rural family practice. Goals and opportunities. *Can Fam Physician* 1996;42:1133-8.
10. 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.
11. Fryer GEJ, Stine C, Vojir C, Miller M. Predictors and profiles of rural versus urban family practice. *Fam Med* 1997;29:115-8.
12. Lebel D, Hogg W. Effect of location on family medicine residents' training. *Can Fam Physician* 1993;39:1066-9.
13. Hecht RC, Farrell JG. Comparative profiles of rural and urban family physicians; based on 100 graduates of the University of Wisconsin family practice residency programs. *Wis Med J* 1983;92:21-4.
14. Rourke JTB, Rourke LL. Rural family medicine training in Canada. *Can Fam Physician* 1995;41:993-1000.
15. Costa AJ, Schrop SL, McCord G, Gillanders WR. To stay or not to stay: factors influencing family practice residents' choice of initial practice location. *Fam Med* 1996;28:214-9.
16. Bass MJ, McWhinney IR, Stewart M, Grindrod A. Changing face of family practice. Trends from 1974 to 1994 in one Canadian city. *Can Fam Physician* 1998;44:2143-9.
17. College of Family Physicians of Canada. *The CFPC National Family Physician Survey* [Part of the Janus Project: family physicians meeting the needs of tomorrow's society. Summary Report]. Mississauga, Ont: College of Family Physicians of Canada; 1998.
18. College of Family Physicians of Canada. *Primary care and family medicine in Canada. A prescription for renewal*. Mississauga, Ont: College of Family Physicians of Canada; 2000.
19. Brennan M, Stewart M. Attitudes and patterns of practice: a comparison of graduates of a residency program in family practice and controls. *J Fam Pract* 1978;7:741-8.
20. Maheux B, Beaudoin C, Jacques A, Lambert J, Levesque A. Effects of residency training in family medicine v. internship training on professional attitudes and practice patterns. *Can Med Assoc J* 1992;146:901-7.
21. Sheps SB, Schechter MT, Grantham P, Finlayson N, Sizto R. Practice patterns of family physicians with 2-year residency v. 1-year internship training: do both roads lead to Rome? *Can Med Assoc J* 1989;140:913-8.
22. Swenson J, Boyle A, Last J, Perez E, Rassell J, Gosselin J. Mentorship in medical education. *Ann R Coll Physicians Surg* 1995;28(3):165-9.
23. Taylor HA, Hansen GH. Perceived characteristics of successful family practice residency maternity care training programs. *Fam Med* 1997;29:709-14.
24. Borkan JM, Miller WL, Neher JO, Cushman R, Crabtree BF. Evaluating family practice residencies: a new method for qualitative assessment. *Fam Med* 1997;29:640-7.
25. Permaul-Woods JA, Carroll JC, Reid AJ, Woodward CA, Ryan G, Domb S, et al. Going the distance: the influence of practice location on the Ontario Maternal Serum Screening Program. *Can Med Assoc J* 1999;161(4):381-5.
26. Wetmore SJ, Agbayani R, Bass MJ. Procedures in ambulatory care. Which family physicians do what in southwestern Ontario? *Can Fam Physician* 1998;44:521-9.
27. Sangster LM, McGuire DP. Perceived role of primary care physicians in Nova Scotia's reformed health care system. Qualitative study. *Can Fam Physician* 1999;45:94-101.
28. Ridout R, Hawker GA. Use of bone densitometry by Ontario family physicians. *Osteoporos Int* 2000;11:393-9.
29. Whiteside C. UBC program meets rural medical needs. *Can Med Assoc J* 1996;154(5):631-2.
30. Finney B, Mattu G. National Family Medicine Resident Survey; Part 2: future practice profile. *Can Fam Physician* 2001;47:342-4 (Eng), 350-2 (Fr).

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