Analysis in Brief

July 2010 **Spending and Health Workforce**

What Do We Know About Family Physicians Who Accept New Patients?

Executive Summary

As a point of entry to the health care system, Canadian family physicians occupy an important place. For this reason, patients' access to family physicians is of great importance, and gaining a better understanding of the factors that can influence whether or not a family physician accepts new patients[i] is critical in terms of understanding and addressing issues associated with patients' access to primary health care. There are two natural perspectives on access to family physicians: that of physicians and that of patients. CIHI's Analysis in Brief *Experiences With Primary Health Care in Canada*[1] analyzed data from the 2008 Canadian Survey of Experiences With Primary Health Care to examine the patient's perspective. This report looks at access from the physician's perspective.

Results from the 2004 and 2007 National Physician Survey (NPS) indicated that rural family physicians were more likely to keep their practices open to new patients than their urban counterparts. Furthermore, other studies have begun to identify factors that could potentially influence the likelihood of family physicians opening their practices to new patients. Using past research findings as a starting point, this report will explore the effect of a range of factors among rural and urban family physicians and their likelihood of accepting new patients. This will allow us to determine if urban and rural family physicians are motivated by different factors when deciding to accept new patients or not. For factors that influence both groups, we will be able to determine if the relative weight of these factors varies for urban and rural physicians.

Who We Are

Established in 1994, CIHI is an independent, not-for-profit corporation that provides essential information on Canada's health system and the health of Canadians. Funded by federal, provincial and territorial governments, we are guided by a Board of Directors made up of health leaders across the country.

Our Vision

To help improve Canada's health system and the well-being of Canadians by being a leading source of unbiased, credible and comparable information that will enable health leaders to make better-informed decisions.

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Federal Identity Program
Production of this report is made possible by financial contributions from Health Canada and provincial and territorial governments. The views expressed herein do not necessarily represent the views of Health Canada or any provincial or territorial government.

i. This analysis focuses on family physicians who indicated on the National Physician Survey (NPS) that their practices were open to **all** new patients. Please refer to the Methodology section of this report for more details on the NPS questionnaire wording and possible response categories.

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Our analysis revealed that location of graduation constituted a significant factor associated with whether or not family physicians kept their practices open. Specifically, international medical graduates (IMGs) were more likely to keep their practices open than Canadian-educated medical graduates (CEMGs). This was true for both rural and urban family physicians; however, the association was stronger in the case of rural family physicians.

When focusing our attention on rural areas, we found that family physicians who belonged to a group or interprofessional practice were also more likely to accept new patients, as were male family physicians. Additionally, in rural areas, the likelihood that family physicians indicated they were accepting new patients varied by age, with those at either end of the age spectrum being most likely to be accepting new patients, compared to their colleagues age 45 to 54.

Finally, when comparing rural family physicians with their urban colleagues who work the same number of hours per week (excluding on-call activities), rural family physicians were significantly more likely to indicate they were accepting new patients.

In the case of urban family physicians, location of graduation, practice setting, sex, age and satisfaction with professional life all showed significant associations with family physicians accepting new patients.

Given the importance of location of graduation as a factor associated with whether both rural and urban family physicians kept their practices open to new patients, the proportions of IMGs in both rural and urban areas was examined. According to the 2007 NPS, 17.3% of urban family physicians were IMGs. This percentage went up to 25.3% in rural areas.

Introduction

One obstacle to Canadians receiving primary care is being able to find a physician who is accepting new patients. Having access to a family physician is of great importance, since primary care in Canada is usually delivered through family physicians and access to a family physician represents both a point of entry to the health care system and a means of ensuring continuity of care across the system.

Not only do Canadians place a lot of importance on having access to a family physician,[2] the 2003 First Ministers' Health Accord identified timely access to health care services as a key priority.[3]

While past studies indicated that family physicians in rural areas were more likely to keep their practices open to new patients,[4] this analysis attempts to identify some of the underlying characteristics of both rural and urban family physicians who choose to keep their practices open. In particular, how do the family physicians' sex, age, country of MD graduation and patient care setting affect the likelihood that their practices will be open to new patients? Are family physicians who are more satisfied with their professional lives or those who work fewer hours in a week more or less likely to be accepting new patients?

Data Sources and Methodology

Data Sources

All data used in this study was taken from the NPS. The 2004 NPS contains information provided by the 21,296 physicians who replied to the survey in 2004 (35.85% response rate). The 2007 data comes from the responses provided by the 19,239 physicians who replied to the 2007 survey (31.64% response rate). In both 2004 and 2007, all family physicians, general practitioners and other specialist physicians in Canada were contacted.

Since the physicians' response rates varied according to age, sex, province, language and year of MD graduation, a weighting system was applied so that not all physicians' responses were counted equally in the analysis. Instead, each physician's response was weighted so that the relative importance of his or her demographic group in the analysis matched that of his or her group among physicians as a whole.

The College of Family Physicians of Canada, the Canadian Medical Association and the Royal College of Physicians and Surgeons of Canada carried out the NPS. In addition to committing significant funding, CIHI actively participated in developing the survey methodology.

For complete details of the methodology of the NPS in 2004 and 2007, please refer to *2004 Methodologies* on the NPS website[5] and *2007 National Physician Survey (NPS) Methodology & Comparability Between the Total Eligible Physician Population, Survey Respondents and Non-Respondents*.[6]

Additional details about the survey, including questionnaires, results and methodologies, are available on the NPS website at www.nationalphysiciansurvey.ca.

Methodology

This study focuses on family physicians who provide patient care and for whom a location of practice (rural versus urban) could be established. This represents a subgroup of 6,411 physicians. Please see the appendix for detailed numbers of respondents to each variable used in this analysis.

Out of these 6,411 physicians, we were interested in the characteristics of family physicians who accepted new patients in their practices. To identify whether or not physicians accepted new patients, the following question from the 2007 NPS was used:

To what extent is your practice accepting new patients into your MAIN patient care setting?

The possible answers were "no restrictions; practice is open to all new patients," "partially closed," "completely closed" and "does not apply to my practice setting." Only family physicians who answered "no restrictions; practice is open to all new patients," "partially closed" or "completely closed" were included in this analysis. Furthermore, the answers "partially closed" and "completely closed" were merged to create a dichotomous variable identifying practices open to all new patients versus practices not open to all new patients.

Next, physicians were asked to give the postal code of their main patient care setting; responses from this question were used to determine physicians' location of practice. Postal codes were assigned to statistical area classifications (SACs) based on a methodology used by Statistics Canada.[7] This allowed us to determine whether a physician practised in a census metropolitan area (CMA), a census agglomeration (CA), a CMA- or CA-influenced zone or the territories (the Yukon, the Northwest Territories or Nunavut).

Rural areas were defined as communities outside of CMAs or CAs. Records for which no postal code was given or where the postal code could not be matched to a SAC were excluded from this analysis.

Descriptive analyses and logistic regressions were conducted. Stepwise forward logistic regression was performed using a 95% confidence level. Odds ratios obtained by the logistic regression were used to assess the strength of the association between predictor variables and the response of interest (in our case, accepting new patients). An odds ratio of one reveals no association and only variables demonstrating a statistically significant association are retained by the model.

In this study, only results showing a 95% level of significance are discussed.

For variance estimation and significance testing of comparisons, the mean bootstrap method[8] was used. Five hundred bootstrap samples were selected, each of them based on 25 replicates. The Bootvar program[9] was used to calculate confidence intervals, to estimate regression parameters and to perform statistical tests.

Patients' Access to Family Physicians

Generally speaking, family physicians are the public's point of entry into the health care system. For that reason, it is pertinent to understand the characteristics of physicians accepting new patients in their practices.

Both the 2004 and 2007 versions of the NPS asked physicians "To what extent is your practice accepting new patients in your main patient care setting?" Figure 1 presents the percentage of family physicians indicating that they were accepting new patients in rural and urban areas based on results from the NPS in 2004 and 2007.

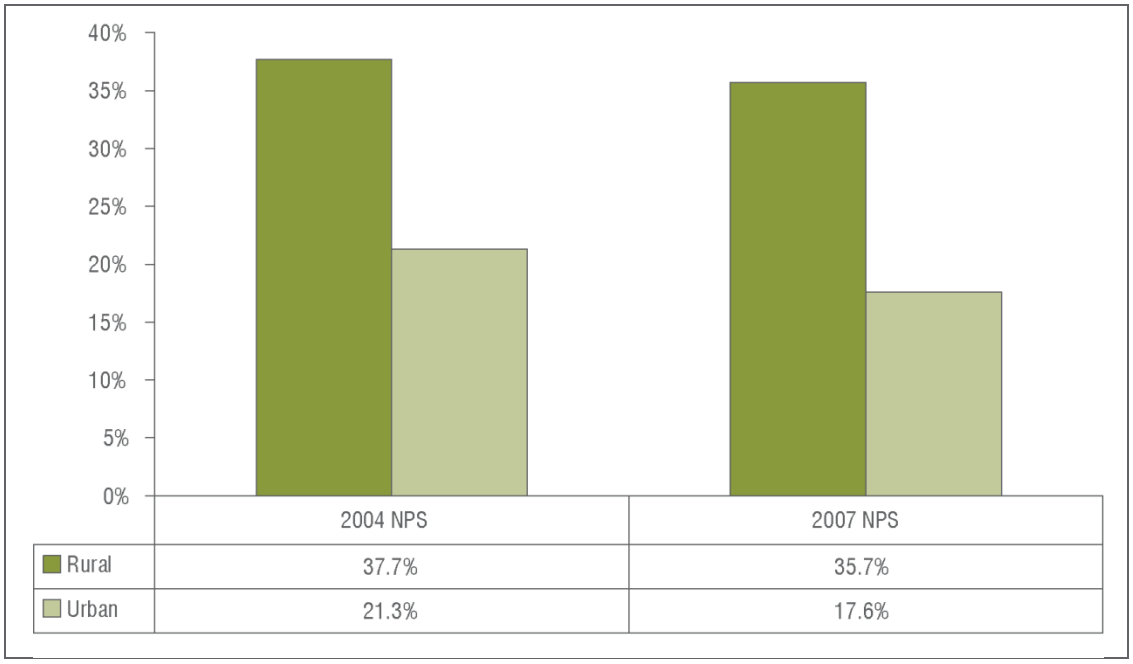
When comparing the two time periods, there was a statistically significant decrease in the percentage of urban family physicians accepting new patients.

Nevertheless, in both 2004 and 2007, family physicians working in rural areas were significantly more likely than physicians working in urban areas to indicate that their practices were accepting new patients.

This finding is consistent with other studies that found location of practice was one of the factors influencing whether or not family physicians keep their practices open.[4]

Figure 1

Percentage of Family Physicians Accepting New Patients, Rural and Urban Practices, Canada, 2004 and 2007



	2004 NPS	2007 NPS
Rural	37.7%	35.7%
Urban	21.3%	17.6%

Note
To make appropriate comparisons between the 2004 NPS and the 2007 NPS, the results of both surveys were weighted.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2004 and 2007 "Protected by Copyright."

Factors Associated With Physicians Who Have Open Practices

Past research confirmed that rural family physicians were more likely to keep their practices open to new patients. In this report, we sought to identify some underlying factors that could help us understand what influences family physicians to keep their practices open to new patients and compare these results for rural and urban physicians.

We chose to focus on variables identified by Dr. Christel A. Woodward and Dr. Raymond W. Pong in their January 2006 article "Factors Associated With Open Practices: Results From the Canadian National Family Physician Survey."[4] Out of the nine variables used in their study, we analysed six. The questions related to the availability of family physicians and availability of medical services were not incorporated in the 2007 National Physician Survey and could not be included in this study for that reason.

Furthermore, the question regarding availability of emergency department services was included in the survey but only in the detailed questionnaire. Similar to the approach of the Canadian census, the 2007 NPS consisted of a core questionnaire to be completed by all respondents and two versions of a detailed questionnaire to be completed by a subset of respondents. One version of the detailed questionnaire was developed for family physicians and general practitioners and the other was developed for all other specialists.[6]

To include the availability of emergency department services variable, analysis involving this question would have been restricted to respondents who answered the detailed questionnaire. This would have meant reducing our sample from 6,411 to 2,499; it was considered advantageous to maintain a larger sample size and exclude this variable from the analyses.

The selected six factors of interest were location of graduation, practice setting, age, sex, total hours worked and satisfaction with professional life. These variables were examined by practice location to determine whether trends were consistent across urban and rural locations.

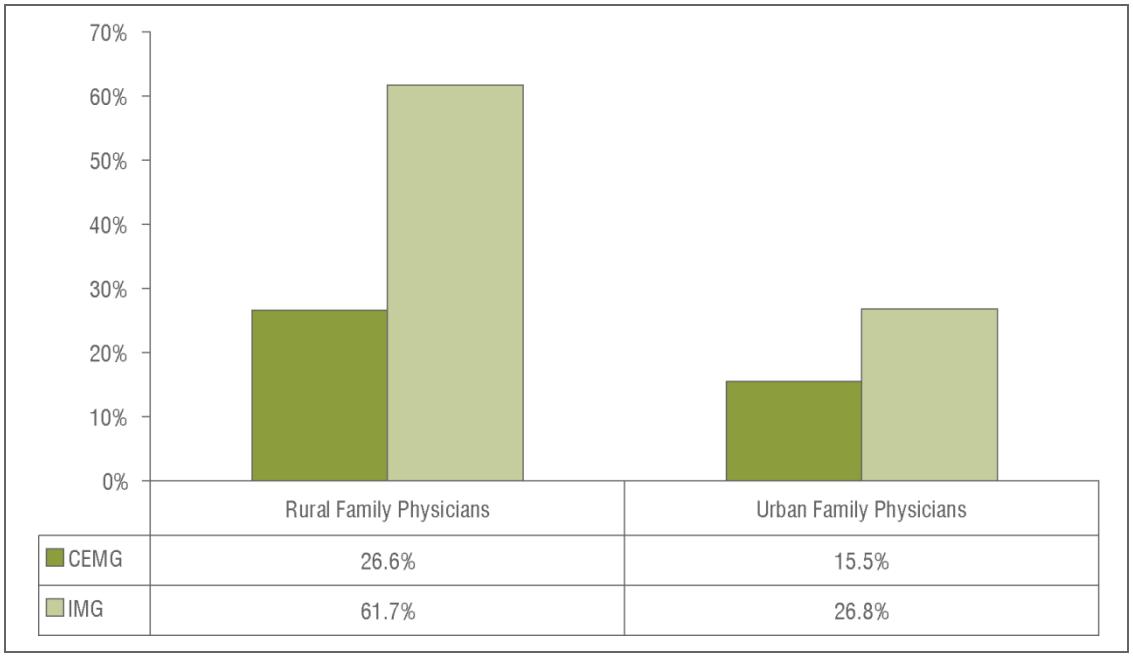
Location of MD Graduation

Figure 2 shows the percentage of rural and urban family physicians indicating they were accepting new patients according to whether they were CEMGs or IMGs.

Among family physicians working in rural areas, IMGs were more likely to say they were accepting new patients than family physicians who obtained their medical degrees in Canada. While the difference was not as pronounced in urban areas, IMGs were still significantly more likely to be accepting new patients.

Figure 2

Percentage of Family Physicians Accepting New Patients by Location of Medical Graduation, Rural and Urban Practices, Canada, 2007



	Rural Family Physicians	Urban Family Physicians
CEMG	26.6%	15.5%
IMG	61.7%	26.8%

Notes
CEMG: Canadian-educated medical graduate.
IMG: international medical graduate.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Practice Setting

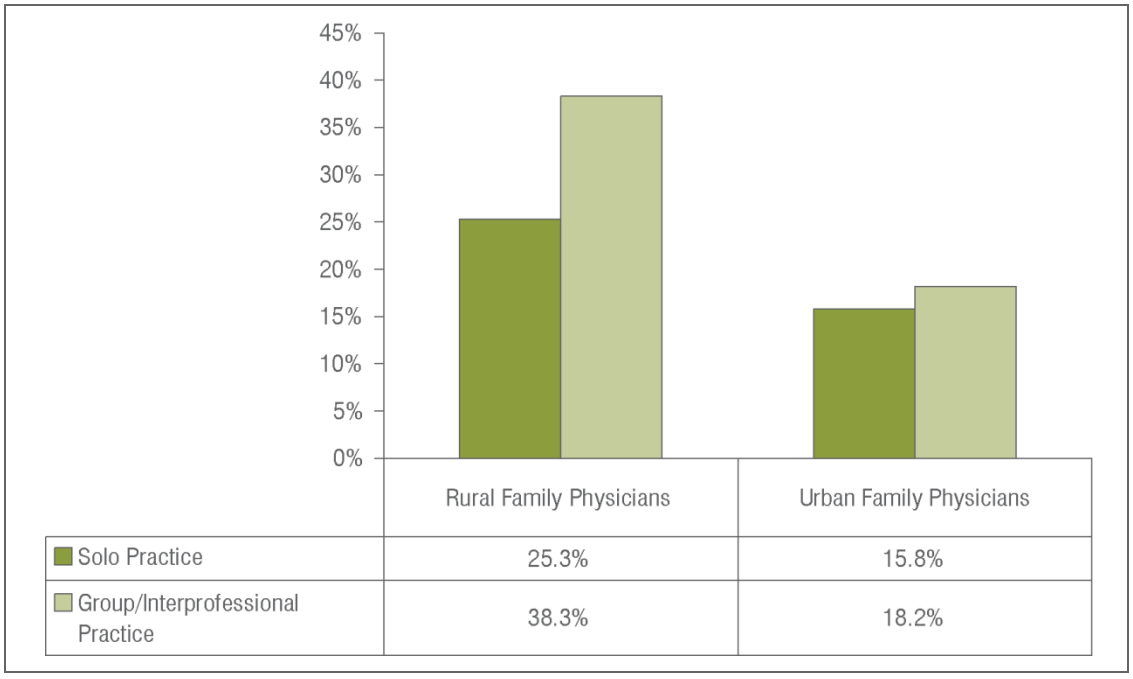
Physicians can practise in different settings, such as solo practice, group practice and interprofessional practice. Physicians' interest in working in close collaboration with colleagues as part of a group practice or family practice network appears to be increasing, and this tendency could influence the delivery of primary health care in Canada.[10–12]

Figure 3 shows the percentage of rural and urban family physicians accepting new patients for physicians working in solo practice and for physicians who were part of a group or interprofessional practice.

The difference between the number of family physicians in solo practice versus the number in group or interprofessional practice was significant in both rural and urban Canada. In rural areas, 38.3% of family physicians working in group or interprofessional practices indicated they were open to new patients, compared to 25.3% of family physicians in solo practices. In urban areas, there was very little difference between the percentage of family physicians in group or interprofessional practices (18.2%) and those in solo practices (15.8%) who said they were accepting new patients.

Figure 3

Percentage of Family Physicians Accepting New Patients by Patient Care Setting, Rural and Urban Practices, Canada, 2007



	Rural Family Physicians	Urban Family Physicians
Solo Practice	25.3%	15.8%
Group/Interprofessional Practice	38.3%	18.2%

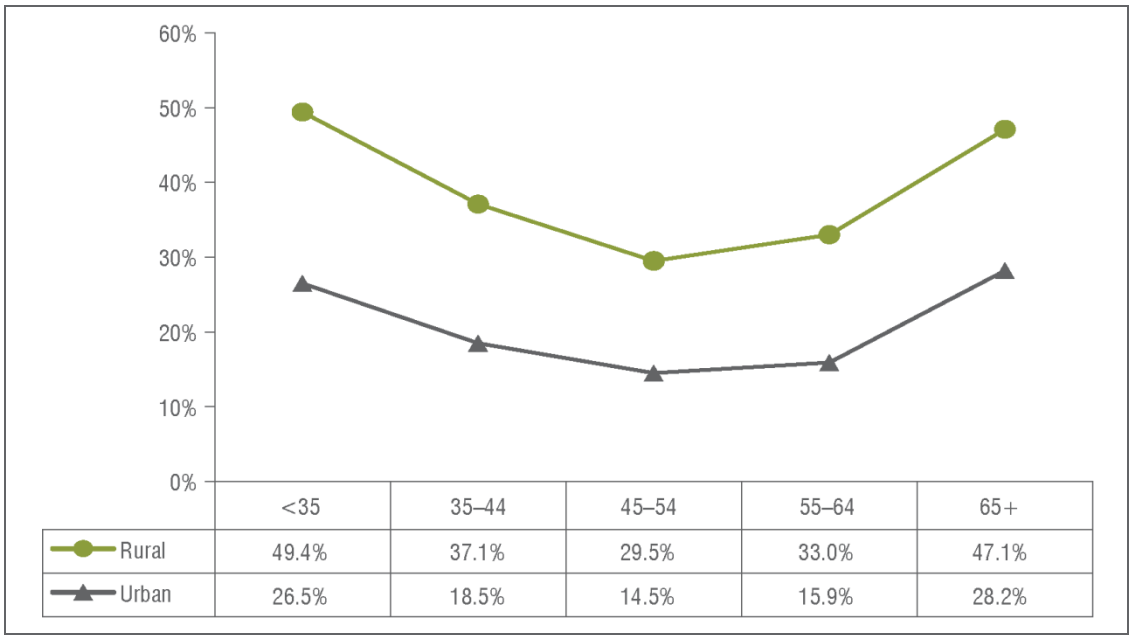
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Age

The likelihood of family physicians indicating they were accepting new patients varied by age, with those at either end of the age spectrum being most likely to be accepting new patients, compared to colleagues age 45 to 54. This trend held for family physicians working in both rural and urban settings; however, for all age ranges, rural family medicine physicians were significantly more likely to say they were accepting new patients than their urban counterparts (Figure 4).

Figure 4

Percentage of Family Physicians Accepting New Patients by Age Group, Rural and Urban Practices, Canada, 2007



	<35	35–44	45–54	55–64	65+
Rural	49.4%	37.1%	29.5%	33.0%	47.1%
Urban	26.5%	18.5%	14.5%	15.9%	28.2%

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

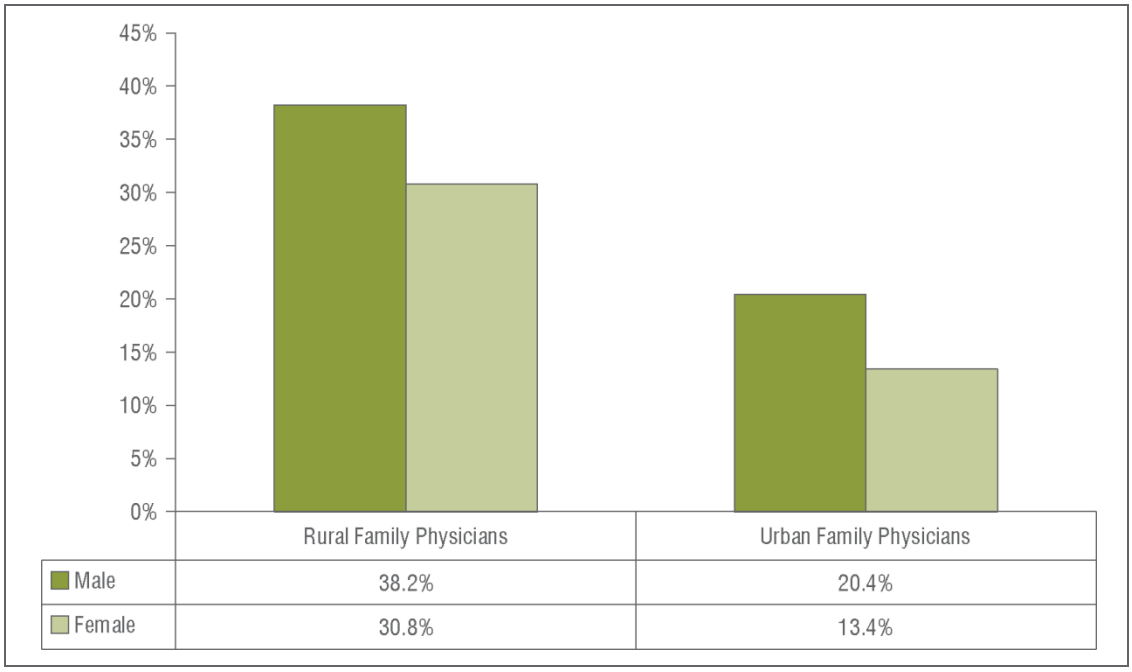
Sex

Past research found that male and female physicians practise differently and that female physicians were more likely to restrict their practice hours during childbearing years.[13–17] Figure 5 shows the percentage of rural and urban family physicians who indicated they were accepting new patients for male and female physicians.

Among both rural and urban family physicians, statistically significant differences were found between male and female physicians, with male family physicians being more likely to indicate they were accepting new patients.

Figure 5

Percentage of Family Physicians Accepting New Patients by Sex, Rural and Urban Practices, Canada, 2007



	Rural Family Physicians	Urban Family Physicians
Male	38.2%	20.4%
Female	30.8%	13.4%

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

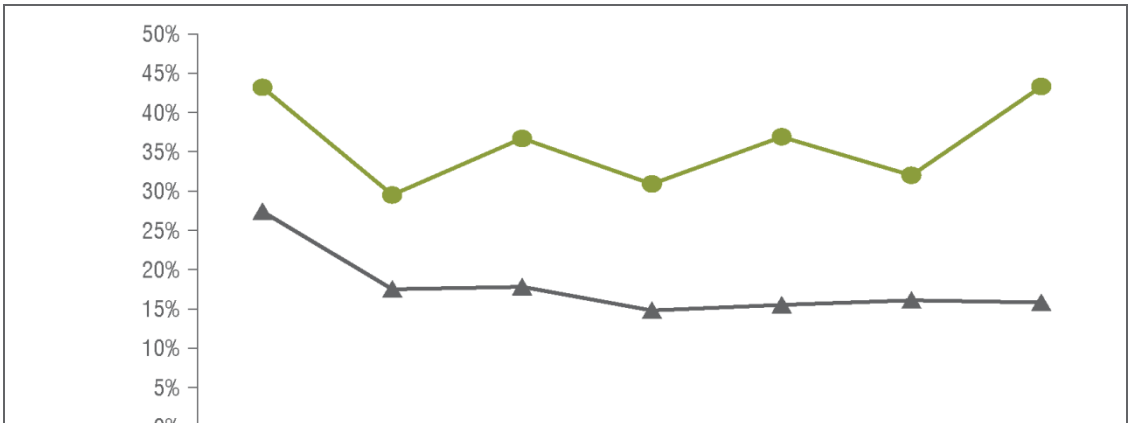
Total Hours Worked (Excluding On-Call Activities)

Another factor that could potentially affect a physician's decision to accept new patients is the total number of hours worked per week. The relationship between the number of hours of direct patient care and total annual billings has been studied and shows a strong correlation;[13] however, the effect of total work hours on a physician's availability to new patients does not appear to have been previously investigated.

In the 2007 NPS, physicians were asked to indicate their total hours worked per week, excluding on-call activities. As illustrated in Figure 6, when comparing rural family physicians with their urban colleagues who worked the same number of hours per week (excluding on-call activities), rural family physicians were significantly more likely to indicate they were accepting new patients. However, among rural family physicians, no clear trend existed by hours worked and there were few significant differences between categories. This was also the case with the urban family physicians subgroup.

Figure 6

Percentage of Family Physicians Accepting New Patients by Total Weekly Hours Worked (Excluding On-Call Activities), Rural and Urban Practices, Canada, 2007



	Fewer Than 30 Hours	30–39 Hours	40–49 Hours	50–59 Hours	60–69 Hours	70–79 Hours	80–99 Hours
Rural	43.2%	29.5%	36.7%	30.9%	36.9%	32.0%	43.3%
Urban	27.4%	17.5%	17.8%	14.8%	15.5%	16.1%	15.8%

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

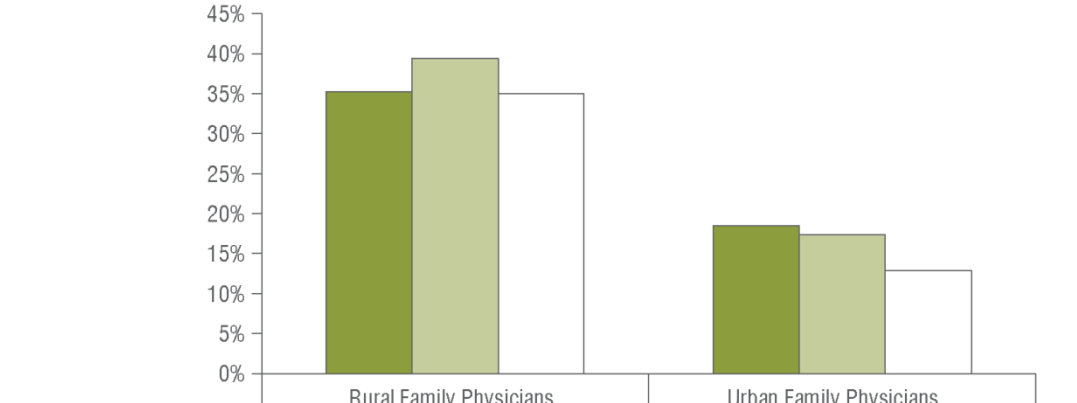
Satisfaction With Professional Life

Finally, it can be hypothesized that physicians' satisfaction with their professional lives would influence their willingness to accept new patients in their practices. The subject of physicians' satisfaction with their professional lives has been extensively studied;[18, 19] however, the impact of satisfaction level on whether family physicians keep their practices open is not well known. In considering this variable, we tried to improve our understanding of the relationship between such satisfaction and the willingness of family physicians to accept new patients.

As illustrated in Figure 7, there was no statistically significant relationship between the likelihood of accepting new patients and satisfaction with professional life for rural family physicians. However, among urban family physicians, those who were satisfied with their professional lives were significantly more likely to indicate they were accepting new patients than those who were dissatisfied.

Figure 7

Percentage of Family Physicians Accepting New Patients by Satisfaction With Professional Life, Rural and Urban Practices, Canada, 2007



	Rural Family Physicians	Urban Family Physicians
Satisfied With Professional Life	35.3%	18.5%
Neutral	39.4%	17.4%
Dissatisfied With Professional Life	35.0%	12.9%

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Factors Associated With Accepting New Patients: A Multivariate Analysis

To further evaluate what factors were associated with whether family physicians were accepting new patients, the variables discussed in the previous section were used as predictors in a logistic regression model. In this model, "accepting new patients" is the response of interest and the resulting odds ratio shows the strength of the association between the predictor and the response of interest. An odds ratio of one reveals no association. Table 1 presents results for rural family physicians and Table 2 presents results for urban family physicians.

Of the six factors tested, five were identified as being significant predictors of whether or not rural family physicians were likely to be accepting new patients. The remaining factor, satisfaction with professional life, did not represent a significant predictor of a practice being open to new patients for physicians in rural areas.

Of these five factors, whether or not family physicians received their MD from Canada or from elsewhere was the strongest predictor. Rural IMGs were 4.3 times more likely to say their practices were open to new patients than their colleagues who graduated in Canada.

Practice setting was also found to be a predictor of a practice being open to new patients for physicians in rural areas. Rural family physicians who belonged to a group or interprofessional practice were 1.9 times more likely to say their practices were open to new patients than family physicians in a solo practice.

Rural family physicians younger than age 35 were more likely to keep their practices open than rural family physicians age 35 to 44 (1.9 times), age 45 to 54 (2.4 times) and age 55 to 64 (2.0 times).

Also, when excluding on-call activities, rural family physicians who worked fewer than 30 hours per week were 1.8 times more likely to accept new patients than physicians who worked between 50 and 59 hours.

Finally, male rural family physicians were 1.4 times more likely than females to say their practices were open to new patients.

Table 1

Predictors of Rural Family Physicians Accepting New Patients, 2007 NPS

	Rural Family Physicians	
Explanatory Variable	Odds Ratio	Odds Ratio 95% Confidence Intervals
Location of Graduation **International Medical Graduate** Versus Canadian-Educated Medical Graduate	4.3	(3.2–5.8)
Practice Setting **Group Practice and Interprofessional Practice** Versus Solo Practice	1.9	(1.4–2.7)
Age **Younger Than 35** Versus 35 to 44	1.9	(1.2–2.9)
Age **Younger Than 35** Versus 45 to 54	2.4	(1.5–3.8)
Age **Younger Than 35** Versus 55 to 64	2.0	(1.2–3.3)
Age **Younger Than 35** Versus 65 and Older	NS	NS
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 30 to 39 Hours	NS	NS
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 40 to 49 Hours	NS	NS
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 50 to 59 Hours	1.8	(1.1–2.9)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 60 to 69 Hours	NS	NS
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 70 to 79 Hours	NS	NS
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 80 to 99 Hours	NS	NS
Sex **Male** Versus Female	1.4	(1.0–1.9)
Satisfaction With Professional Life **Satisfied** Versus Neutral	NS	NS
Satisfaction With Professional Life **Satisfied** Versus Dissatisfied	NS	NS

Notes
Bold fonts identify the reference categories.
NS: non-significant results.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 “Protected by Copyright.”

For urban family physicians, all six factors tested were identified as being significant predictors of whether family physicians were likely to be accepting new patients; however, none had as strong an association as that of IMGs in rural Canada.

Unlike rural family physicians, where country of MD training was by far the largest contributing factor tested, the predictors' strength of association for urban family physicians accepting new patients was more evenly distributed.

For example, in urban areas

- Internationally trained physicians were 1.9 times more likely to say their practices were open to new patients than Canadian-trained physicians.
- Family physicians who belonged to a group or interprofessional practice were 1.2 times more likely to say their practices were open to new patients than family physicians in a solo practice.
- Physicians who worked fewer than 30 hours per week (excluding on-call activities) were more likely to say their practices were open to new patients than those who worked more hours.
- Male family physicians were 1.9 times more likely than females to say their practices were open to new patients.
- Family physicians younger than age 35 were more likely to keep their practices open than their colleagues age 35 to 44 (1.7 times), age 45 to 54 (2.3 times) and age 55 to 64 (2.3 times).
- Physicians satisfied with their professional lives were 1.4 times more likely to keep their practices open.

Table 2

Predictors of Urban Family Physicians Accepting New Patients, 2007 NPS

Urban Family Physicians		
Explanatory Variable	Odds Ratio	Odds Ratio 95% Confidence Intervals
Location of Graduation **International Medical Graduate** Versus Canadian-Educated Medical Graduate	1.9	(1.6–2.3)
Practice Setting **Group Practice and Interprofessional Practice** Versus Solo Practice	1.2	(1.0–1.5)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 30 to 39 Hours	1.5	(1.1–2.0)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 40 to 49 Hours	1.6	(1.3–2.1)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 50 to 59 Hours	2.3	(1.8–3.0)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 60 to 69 Hours	2.1	(1.6–2.8)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 70 to 79 Hours	2.1	(1.4–3.1)
Total Hours Worked (Excluding On-Call Activities) **Fewer Than 30 Hours** Versus 80 to 99 Hours	2.3	(1.4–3.9)
Sex **Male** Versus Female	1.9	(1.6–2.3)
Age **Younger Than 35** Versus 35 to 44	1.7	(1.2–2.3)
Age **Younger Than 35** Versus 45 to 54	2.3	(1.7–3.0)
Age **Younger Than 35** Versus 55 to 64	2.3	(1.7–3.2)
Age **Younger Than 35** Versus 65 and Older	NS	NS
Satisfaction With Professional Life **Satisfied** Versus Neutral	NS	NS
Satisfaction With Professional Life **Satisfied** Versus Dissatisfied	1.4	(1.1–1.8)

Notes
Bold fonts identify the reference categories.
NS: non-significant results.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

International Medical Graduates in Rural and Urban Canada

As identified in Figure 1, rural physicians were significantly more likely to indicate their practices were open to new patients—in the 2007 survey they were twice as likely as urban physicians to have open practices (35.7% versus 17.6%). The results of the logistic regression also indicate that place of graduation was a key factor in predicting the likelihood of rural family physicians accepting new patients.

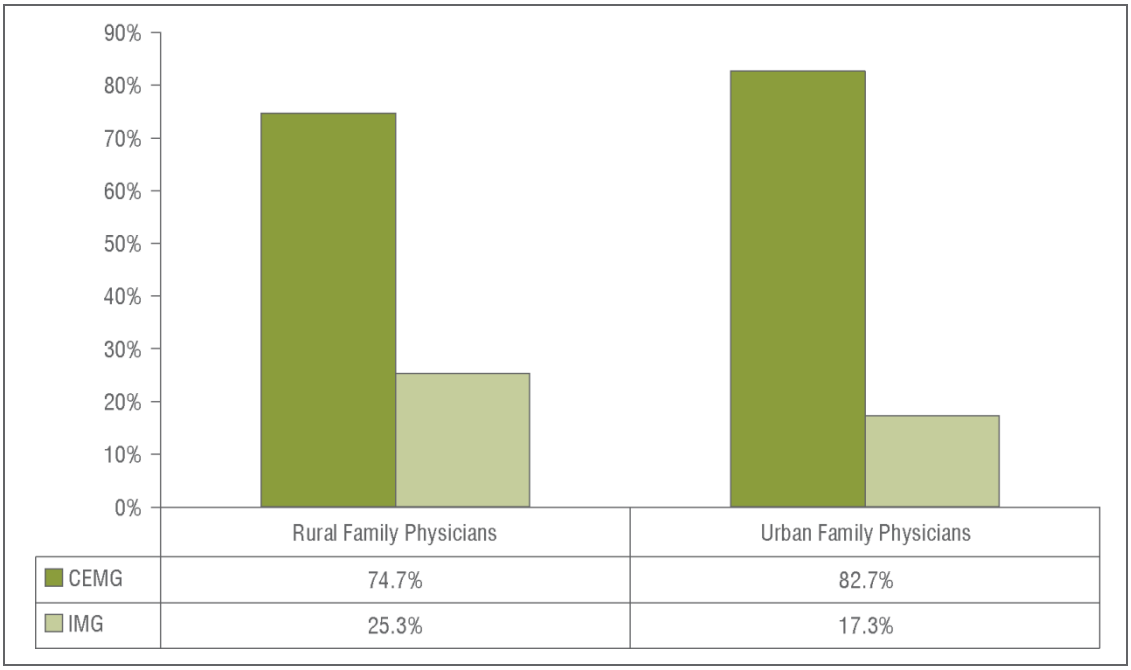
In view of the importance of location of graduation for both rural and urban family physicians, it is pertinent to identify what proportions of physicians were IMGs in both rural and urban areas.

Figure 8 presents the proportion of CEMGs and IMGs in rural and urban regions.

Given that IMGs were considerably more likely to be accepting new patients, and that IMG physicians represented a large percentage of family physicians in rural areas, it is no surprise that rural family physicians as a whole were more likely to be accepting new patients.

Figure 8

Percentage of CEMGs and IMGs Among Rural and Urban Family Physicians, Canada, 2007



	Rural Family Physicians	Urban Family Physicians
CEMG	74.7%	82.7%
IMG	25.3%	17.3%

Notes
CEMG: Canadian-educated medical graduate.
IMG: international medical graduate.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Conclusion

Data from the 2007 NPS indicated that family physicians working in rural areas were significantly more likely to accept new patients than physicians working in urban areas. This was very similar to the results observed in the 2004 NPS. The difference in these two groups motivated us to analyze them separately.

Based on past research, six factors potentially associated with practice status were examined for both rural and urban family physicians. These six factors were then used as predictor variables in two logistic regression models. One model was built for rural family physicians and another for urban family physicians.

In both models, location of medical graduation, practice setting, age, total hours worked (excluding on-call activities) and sex represented significant predictors of whether family physicians kept their practices open. Satisfaction with professional life showed a significant association in the case of urban physicians only.

Results from the rural and urban models differed in more than one aspect:

- The impact of location of graduation was of greater magnitude for rural family physicians than for their urban colleagues (odds ratio of 4.3 for rural physicians versus 1.9 for urban physicians).
- Being part of a group or interprofessional practice made a rural family physician almost twice as likely to accept new patients. Urban family physicians were 1.2 times more likely to accept new patients when they were part of a group or interprofessional practice.
- In urban areas, male family physicians were almost twice as likely to keep their practices open to new patients as female physicians. In rural areas, male family physicians were 1.4 times as likely to keep their practices open to new patients as female physicians.

Finally, not only are IMG family physicians more likely to keep their practices open to new patients, but IMG family physicians also represent a large percentage of family physicians in rural areas. These two realities contribute to explaining why rural family physicians as a whole are more likely to be accepting new patients.

Related Publications

For a discussion on the difference in practice characteristics between urban and rural family physicians, along with a detailed analysis of the geographical distribution of physicians in Canada, we recommend *Geographic Distribution of Physicians in Canada: Beyond How Many and Where*.[20]

On the subject of international medical graduates in Canada, a detailed analysis can be found in a CIHI Analysis in Brief released in August 2009, titled *International Medical Graduates in Canada: 1972 to 2007*.[21]

For comprehensive data on physicians in Canada, one can refer to CIHI's *Supply, Distribution and Migration of Canadian Physicians, 2008*.[22]

To examine access to primary health care from patients' perspectives, we suggest CIHI's Analysis in Brief *Experiences With Primary Health Care in Canada*.[1]

Acknowledgements

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About CIHI

The Canadian Institute for Health Information (CIHI) collects and analyzes information on health and health care in Canada and makes it publicly available. Canada's federal, provincial and territorial governments created CIHI as a not-for-profit, independent organization dedicated to forging a common approach to Canadian health information. CIHI's goal: to provide timely, accurate and comparable information. CIHI's data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.

Appendix

To perform this study, numerous variables were used; some of these variables were recoded to make them suitable for the analysis.

This section lists the questions used in the analysis as they appear in the questionnaire sent to family physicians in the 2007 NPS. A description of how each variable was used is presented, followed by the unweighted number of respondents for each variable. This information is made available to give the reader all the facts needed to better assess the results.

Which of these best describes you?

Only physicians who answered "family physician/general practitioner" or "family physician/general practitioner with a special focus to my practice" were included in this analysis.

Do you provide patient care?

Only physicians who provided patient care were included in this analysis.

Please provide the 6-digit postal code of your MAIN patient care setting OR main work setting if you do not provide patient care

This question was used to determine whether a physician practised in a rural or an urban area.

Postal codes were assigned to statistical area classifications (SACs) based on a methodology used by Statistics Canada.[7] This allowed us to determine whether a physician practised in a census metropolitan area (CMA), a census agglomeration (CA), a CMA- or CA-influenced zone or the territories (the Yukon, the Northwest Territories or Nunavut). Rural areas are defined as communities outside of CMAs or CAs.

These three questions were used to identify the group of interest for this study, which is family medicine physicians who provided patient care in rural or urban areas.

Table A2 presents the number of records obtained from the 2007 NPS that represent the focus of this analysis. Table A1 shows the same group of respondents for the 2004 NPS.

Table A1

Unweighted Number of Respondents, Rural and Urban Practices, Canada, 2004

2004 NPS	Rural Family Physicians	Urban Family Physicians
Family Medicine Physicians Who Provide Patient Care	1,445	6,159

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2004 "Protected by Copyright."

Table A2

Unweighted Number of Respondents, Rural and Urban Practices, Canada, 2007

2007 NPS	Rural Family Physicians	Urban Family Physicians
Family Medicine Physicians Who Provide Patient Care	1,237	5,174

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

To what extent is your practice accepting new patients into your MAIN patient care setting?

Only family physicians who answered "no restrictions; practice is open to all new patients," "partially closed" or "completely closed" were included in this analysis.

Furthermore, the answers "partially closed" and "completely closed" were merged to create a dichotomous variable identifying practices open to all new patients versus practices not open to all new patients.

Tables A3 and A4 show results from the 2004 NPS and 2007 NPS.

Table A3

Unweighted Number of Respondents by Practice Status, Rural and Urban Practices, Canada, 2004

2004 NPS	Rural Family Physicians	Urban Family Physicians
Open to All New Patients	538	1,284
Partially or Completely Closed	907	4,875
Total	**1,445**	**6,159**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2004 "Protected by Copyright."

Table A4

Unweighted Number of Respondents by Practice Status, Rural and Urban Practices, Canada, 2007

2007 NPS	Rural Family Physicians	Urban Family Physicians
Open to All New Patients	428	888
Partially or Completely Closed	809	4,286
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Please indicate where you completed your medical training

Physicians who answered "USA" or "other country" were considered to be IMGs. All others were considered to be CEMGs. Physicians who did not answer this question were excluded from the regression analysis.

Table A5

Unweighted Number of Respondents by Location of Medical Graduation, Rural and Urban Practices, Canada, 2007

Location of Medical Graduation	Rural Family Physicians	Urban Family Physicians
CEMG	909	4,185
IMG	289	864
No Response	39	125
Total	**1,237**	**5,174**

Notes
CEMG: Canadian-educated medical graduate.
IMG: international medical graduate.
Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Please indicate how your MAIN patient care setting is organized

This variable was recoded to create a dichotomous variable. Answers "group practice" and "interprofessional practice" were merged to identify solo practices versus group and interprofessional practices.

Physicians who did not answer this question were excluded from the regression analysis.

Table A6

Unweighted Number of Respondents by Patient Care Setting, Rural and Urban Practices, Canada, 2007

Patient Care Setting	Rural Family Physicians	Urban Family Physicians
Solo Practice	273	1,330
Group/Interprofessional Practice	952	3,788
No Response	12	56
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Your year of birth

This question was used to determine physicians' ages. Ages were then classified in the following subgroups: younger than 35, 35 to 44, 45 to 54, 55 to 64 and 65 and older. Physicians who did not answer this question were excluded from the regression analysis.

Table A7

Unweighted Number of Respondents by Age Group, Rural and Urban Practices, Canada, 2007

Age	Rural Family Physicians	Urban Family Physicians
<35	133	367
35–44	333	1,110
45–54	405	1,869
55–64	288	1,373
65+	71	413
No Response	7	42
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Sex

Physicians who did not answer this question were excluded from the regression analysis.

Table A8

Unweighted Number of Respondents by Sex, Rural and Urban Practices, Canada, 2007

Sex	Rural Family Physicians	Urban Family Physicians
Male	758	2,821
Female	462	2,263
No Response	17	90
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Total hours worked per week (excluding on-call activities)

In the 2007 NPS questionnaire, physicians were asked specifically for their total hours worked per week, excluding on-call activities. The term "on-call" was defined as "time outside of regularly scheduled activity during which you are available to patients."

The answers to this question were recoded in the following subgroups: fewer than 30 hours, 30 to 39 hours, 40 to 49 hours, 50 to 59 hours, 60 to 69 hours, 70 to 79 hours and 80 to 99 hours. Physicians who did not answer this question or who answered more than 99 hours ("unknown" in Table A9) were excluded from the regression analysis.

Table A9

Unweighted Number of Respondents by Total Hours Worked Weekly (Excluding On-Call Activities), Rural and Urban Practices, Canada, 2007

Total Hours Worked Weekly (Excluding On-Call Activities)	Rural Family Physicians	Urban Family Physicians
Missing	56	161
Fewer Than 30 Hours	93	446
30–39 Hours	140	693
40–49 Hours	283	1,321
50–59 Hours	313	1,289
60–69 Hours	183	748
70–79 Hours	103	292
80–99 Hours	52	163
Unknown	14	61
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 "Protected by Copyright."

Please rate your satisfaction with each of the following: Your current professional life

Answers to this question were recoded in the following subgroups: “very satisfied” and “somewhat satisfied” were recoded as “satisfied”; neutral remained the same; and “somewhat dissatisfied” and “very dissatisfied” were recoded as “dissatisfied.”

Physicians who did not respond or who answered “not applicable” were not included in the regression analysis.

Table A10

Unweighted Number of Respondents by Level of Satisfaction With Professional Life, Rural and Urban Practices, Canada, 2007

Satisfaction With Professional Life	Rural Family Physicians	Urban Family Physicians
Satisfied With Professional Life	935	3,846
Neutral	88	434
Dissatisfied With Professional Life	178	755
Not Applicable	0	6
No Response	36	133
Total	**1,237**	**5,174**

Source
CFPC/CMA/RCPSC National Physician Survey Database, 2007 “Protected by Copyright.”

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