Immigrant status and having a regular medical doctor among Canadian adults

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ABSTRACT

OBJECTIVE: New immigrants generally arrive in Canada with a health advantage over their Canadian counterparts, but lose that advantage over time. Difficulties in acquiring a physician may contribute. Past studies relied on older data, and lacked control for many confounders and assessment of gender differences. We assessed the relationship between immigrant status and having a regular doctor among Canadian adults.

METHODS: Cross-sectional data from the 2011–2012 Canadian Community Health Survey were self-reported by 73,958 respondents aged 18–64, representing >20 million Canadian adults. The relationship between immigrant status and having a doctor was analyzed using χ^2 and logistic regression analyses stratified by gender. Age, body mass index, race, education, province of residence, physical activity, chronic conditions, self-perceived health, and number of children in household were controlled.

RESULTS: Approximately 77% of males and 87% of females reported having a doctor. About 7% of respondents reported being new immigrants in Canada (0–9 years), while 16% were established immigrants (≥ 10 years). For males (M) and females (F) respectively, 78% and 88% of non-immigrants, 55% and 68% of new immigrants, and 84% and 91% of established immigrants reported having a doctor ($p < 0.001$). Compared to non-immigrants, new immigrants were significantly less likely to have a doctor (OR (95% CI) M: 0.43 (0.38–0.47); F: 0.36 (0.32–0.41)), while established immigrants were significantly more likely to have a doctor (M: 1.13 (1.03–1.24); F: 1.16 (1.03–1.30)).

CONCLUSION: New Canadian immigrants are less likely to have a regular doctor compared to non-immigrants, and should be targeted by policies and programs facilitating finding a doctor.

KEY WORDS: Canada; immigrant health; healthy immigrant effect; primary health care; health services accessibility

La traduction du résumé se trouve à la fin de l'article.

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Immigrants comprise a large and growing population segment in Canada. According to the 2011 Canadian Census, about 67% of Canada's population growth up to 2011 was due to immigration, which is projected to increase to 80% by 2031.¹ In 2011, immigrants made up approximately 21% of the Canadian population, representing the highest proportion compared to any other G8 country.² Between 2006 and 2011, Canada's largest immigrant source was Asia, with South Asians, Chinese, and African Americans representing the largest immigrant groups in Canada.²

Many studies have confirmed the presence of a "healthy immigrant effect": new immigrants arrive in a host country with a health advantage over their native-born counterparts, but experience a health decline over time.^{3–7} This decline is evident when it comes to their self-reported general health status, chronic conditions, disabilities and mental health problems.⁸ Cross-sectional data showed that recent immigrants had better functional health and self-reported health, and lower disability, smoking and drinking rates compared to the Canadian-born population.⁶ However, this health advantage decreased with increased duration of residence in Canada: established immigrants, in comparison to their Canadian-born counterparts, had similar levels of functional health and disability rates, and worse self-reported health. Similarly, positive associations between

years of residency and poor self-reported health, overweight and obesity, and alcohol drinking habits were more recently reported among Canadian immigrants.⁷ It has been suggested that these health declines stem from many sources, including social isolation,^{3,7} socio-economic difficulties,^{3,7,9} discrimination,^{5,7} and poor access to health services.^{3,5}

In 2013, approximately 85% of the Canadian population ≥ 12 years of age reported having a regular medical doctor, with a higher proportion of females (88%) having a doctor than males (81%).¹⁰ In general, a physician represents the first point of contact for health care for Canadians, and having a doctor is associated with more physician and specialist visits, essential in the early prevention and treatment of diseases.¹¹ Canadians without a regular doctor may choose to access walk-in clinics for health care, despite the possibility of lack of quality and continuity of care.¹² If the health advantage of immigrants declines over time following arrival in a host country, having a regular doctor may be

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especially important in maintaining the health of this population. The problems that immigrants face when accessing primary health care are well documented in the literature. While a few studies reported no differences in Canada with regards to having a regular doctor between immigrants and their native-born counterparts,^{13–15} others have reported that immigrants are less likely to have a doctor compared to the native-born population.¹⁶ Still others have shown that these disparities are only present for new Canadian immigrants.^{7,16} Several studies from the United States have also reported differences between immigrant and non-immigrant populations;^{13,14,17,18} however, important differences in the nature of the health care systems in Canada and the US create a need for uniquely Canadian data. Problems in acquiring primary care among immigrants have been attributed to communication difficulties,^{4,7,17,19,20} cultural differences,^{3,4,19} problems locating a doctor,¹⁹ lack of knowledge of health care,²⁰ poor geographic access to a physician,¹⁹ and mistrust in health care providers.³

Past literature has suggested the need for more research on immigrant health in Canada, given the country's large immigrant population.⁸ Several studies on access to health care among immigrants have lacked control for important variables, including body mass index (BMI), physical activity levels, presence of chronic conditions, and number of children in household,^{13,14} and few immigrant studies have investigated gender differences. Specifically, gender may be an important barrier in health care access in terms of seeking care, compromising the delivery of equitable care, and one's ability to obtain appropriate health care services.²¹ Given that having a regular doctor differs by gender in the overall Canadian population and gender is a significant determinant of health, gender could also represent a barrier in accessing health care in the immigrant population.^{3,22} The objective of this study was to examine the association between immigrant status and having a regular doctor, including gender differences, using a large representative population sample of Canadian adults.

METHODS

Data/sample

The sample was drawn from the 2011–2012 Canadian Community Health Survey (CCHS) public use microdata file. A detailed description of the methodology has been published.²³ The CCHS is a cross-sectional survey conducted by Statistics Canada that gathers data pertaining to health status, health determinants and health system utilization for the Canadian population. Using computer-assisted interviews (in-person or telephone), the CCHS targets persons ≥ 12 years of age living in private dwellings in the 10 Canadian provinces and 3 territories, covering 98% of the population. Full-time members of the Canadian Forces, institutional residents, individuals living on Indian Reserves or Crown Lands, and residents of certain remote regions are excluded. The 2011–2012 CCHS combined response rate at the Canadian population level was 68.4%: of 183,721 households selected to participate, 144,000 accepted (78.4% household-level response rate), and of the 144,000 eligible participants (one per household), a total of 125,645 completed valid interviews (87.3% person-level response rate). Statistics Canada obtained informed consent from each respondent, in accordance with Canadian federal

legislative requirements. The current study sample included 73,958 respondents aged 18–64 with complete data for all study variables, representing 20,147,090 Canadian adults.

Measures

Independent Variable: Immigrant Status

Immigrant status specifies whether or not the respondent is born a Canadian citizen, and if not, how long the respondent has lived in Canada since immigration. The variable was derived from the following questions: “Were you born a Canadian citizen?” with a simple yes/no response option, and those who answered no were then asked “What is the year that you first came to Canada to live?” The CCHS public use data file pre-categorizes respondents according to immigrant status as being a new immigrant (0–9 years), established immigrant (10 or more years) or non-immigrant.

Outcome: Having a Regular Doctor

Participants were asked “Do you have a regular medical doctor?” with a simple yes/no response option.

Covariates

Covariates were controlled given their potential to confound the relationship between immigrant status and having a regular doctor, and previously reported associations with health service utilization.²⁴ BMI (kg/m^2) was derived from self-reported height and weight, and categorized respondents as underweight, normal weight, overweight or obese according to the Canadian Guidelines for Body Weight Classification in Adults.²⁵ The physical activity index was derived using an adapted version of the Minnesota Leisure Time Physical Activity Questionnaire.²⁶ Respondents were asked to indicate their participation frequency in the past three months and average duration per occasion for 21 questionnaire-specified leisure physical activities and up to three additional volunteered activities. Average daily energy expended during leisure time physical activity was calculated and expressed in kilocalories per kilogram per day (KKD). Respondents were categorized as active (≥ 3.0 KKD), moderately active (1.5–2.9 KKD) or inactive (< 1.5 KKD).²⁷ Age (18–24/25–34/35–44/45–54/55–64), race/ethnicity (White/visible minority), level of education ($<$ post-secondary/post-secondary), province of residence (West: British Columbia, Alberta; Prairies: Saskatchewan, Manitoba; Ontario; Quebec; East: New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador; Territories: Yukon, Northwest, Nunavut), presence of any chronic conditions (yes/no), self-perceived health (excellent/very good/good vs. fair/poor), and number of children in household (none/ ≥ 1) were also controlled.

Analysis

All analyses were stratified according to gender. Descriptive statistics were tabulated. The proportion of Canadian adults having a regular doctor according to immigrant status categories was initially assessed bivariate using χ^2 tests. The odds of having a regular doctor according to immigrant status categories were then assessed using multivariate logistic regression, controlling for age, BMI, race/ethnicity, education, province of residence, physical activity, chronic condition presence, self-perceived health, and number of children in household.

Data were weighted as per Statistics Canada guidelines to calculate Canadian population summary statistics. As recommended by Statistics Canada,²³ in order to produce more reasonable 95% CIs which take into account the unequal probabilities of selection, the provided weights were re-scaled to a mean weight of 1 by dividing the original weight by the mean of the original weights for the current analytic sample ($n = 73,958$).

The analyses were carried out using SPSS Statistics 21.0 (IBM, Armonk, NY, USA).

RESULTS

Characteristics of the study participants are presented in Table 1. Overall, 77% of males and 87% of females reported having a regular medical doctor. Approximately 7% of both males and females were classified as new immigrants (lived in Canada for 0–9 years), while 16% were established immigrants (lived in Canada for 10 or more years).

Among males, having a regular doctor was reported by 78% of non-immigrants, 84% of established immigrants, and 55% of new immigrants; among females, 88% of non-immigrants, 91% of established immigrants, and 68% of new immigrants reported having a regular doctor ($p < 0.001$ for all) (Figure 1). Differences between males and females were significant across all immigrant status categories, with females being more likely than males to have a doctor (data not shown).

The results of the multivariate logistic regression analysis are presented in Table 2, predicting the odds of having a regular doctor according to immigrant status categories, controlling for age, BMI, race/ethnicity, education, province of residence, physical activity, chronic condition presence, self-perceived health, and number of children in household. Compared to non-immigrants, new male and female immigrants had lower odds of having a regular doctor (OR (95% CI) males: 0.43 (0.38–0.47); females: 0.36 (0.32–0.41)), while established immigrants had slightly higher odds of having a regular doctor (males: 1.13 (1.03–1.24); females: 1.16 (1.03–1.30)). For male participants, those who were inactive had significantly lower odds of having a regular doctor compared to active participants. Both male and female participants suffering from at least one chronic condition were more likely to have a doctor compared to participants with no chronic conditions. For those who were overweight or obese, only males had higher odds of having a doctor compared to normal weight males. Among the visible minority participants, only females were significantly less likely to have a regular doctor compared to White females.

DISCUSSION

This study explored the association between immigrant status and having a regular medical doctor in a large representative sample of Canadian adults, of whom 7% were new immigrants and 16% were established immigrants. Overall, 10% more women reported having a doctor compared to men. Compared to non-immigrants, new immigrants were up to 60% less likely to have a regular doctor, while established immigrants were about 15% more likely to have a doctor.

Previous research examining the relationship between immigrant status and having a doctor in Canadian adults has shown an inconsistent association. While some authors have reported no association,^{13–15} others have corroborated our results in

Table 1. Sample characteristics, 2011–2012 Canadian Community Health Survey

Characteristic	Males (51.0%)	Females (49.0%)
Age (years)		
18–24	14.3%	14.4%
25–34	21.1%	19.7%*
35–44	21.3%	21.2%
45–54	22.8%	23.4%*
55–64	20.5%	21.3%*
BMI		
Normal weight	39.2%	53.0%*
Underweight	1.2%	4.2%*
Overweight	40.2%	25.3%*
Obese	19.4%	17.5%*
Race/ethnicity		
White	76.8%	76.3%
Visible minority	23.2%	23.7%
Education		
Post-secondary	70.9%	73.7%*
<Post-secondary	29.1%	26.3%*
Province of residence		
West	25.4%	24.5%*
Prairies	6.3%	6.1%
Ontario	23.4%	23.2%
Quebec	38.0%	38.9%*
East	6.7%	7.0%
Territories	0.3%	0.3%
Physical activity		
Active (≥ 3.0 KKD)	29.9%	26.2%*
Moderately active (1.5–2.9 KKD)	25.3%	26.8%*
Inactive (< 1.5 KKD)	44.8%	47.0%*
≥ 1 Chronic condition		
No	54.1%	45.0%*
Yes	45.9%	55.0%*
Self-rated health		
Excellent/very good/good	91.3%	90.0%*
Fair/poor	8.7%	10.0%*
# Children in household		
None	75.3%	72.9%*
≥ 1	24.7%	27.1%*
Immigrant status		
Non-immigrant	76.7%	76.7%
New immigrant (0–9 years)	7.5%	7.3%
Established immigrant (10+ years)	15.8%	16.0%
Regular medical doctor		
Yes	77.2%	87.2%*
No	22.8%	12.8%*

Note: BMI = body mass index; KKD = kilocalories/kilogram/day; West = British Columbia, Alberta; Prairies = Saskatchewan, Manitoba; East = New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador; Territories = Yukon, Northwest, Nunavut.

* $p < 0.001$ significant difference between males and females.

this area.^{7,16} A systematic review from the US also concluded that immigrant adults were less likely to have a regular doctor compared to their counterparts born in the US.¹⁷ However, the universal (socialized) health care system in Canada creates very different conditions compared to the user-pay system in the US, creating the need for Canadian studies in this area. Prior cross-sectional evidence in Canada showed that new immigrant men and women were less likely to have a family doctor than the native-born population; similar to our study, the proportion of immigrants having a family doctor increased to a level more similar to that of the native-born population with increasing years in Canada.¹⁶ Furthermore, past research utilizing data from the 2007–2008 CCHS found that new immigrants in Canada had lower rates of health care access (including having a usual source of care) compared to established immigrants.²⁸ Similarly, a more recent study using the 2001 and 2010 CCHS cycles found a statistically significant difference between the proportion of new immigrants and established immigrants who had a regular doctor (73% and

Figure 1. Proportion of Canadian adults who have a regular doctor according to immigrant status category, by gender (CCHS 2011–2012). $\chi^2 p < 0.001$ for all; * $p < 0.05$ significantly different from non-immigrants.

91% respectively).⁷ In the current study using the 2011–2012 CCHS data, while the proportion of established immigrants having a regular doctor (84% males, 91% females) supports the results of the prior study, the proportion of new immigrants having a doctor was, on average, smaller (55% males, 68% females). Hence, it is possible that the ability for new immigrants to access a doctor may be worsening over time.

Previous results from a 12-year longitudinal study demonstrated that Canadian adult immigrants (White and non-White) had similar, if not better, access to a doctor compared to the Canadian-born population, with access improving among immigrants with longer residency.¹⁵ The researchers concluded a lack of evidence that immigrants have poorer health care access compared to individuals born in Canada.¹⁵ However, the average length of residency of immigrant participants, whether recently arrived or established long-term, was not reported. Based on the results of our study, early residency among immigrants may represent a barrier to health care. In addition, findings from the Joint Canada–United States Survey of Health demonstrated that there were no differences in having a regular doctor between immigrant and non-immigrant adults in Canada.^{13,14} However, these studies did not analyze the relationship according to length of residency, nor did they control for variables such as BMI and other important health-related factors. The current study, using a considerably larger population sample, was able to adjust for such variables as BMI, physical activity, province of residence, presence of any chronic conditions, self-perceived health, and number of children in household, affirming an independent association between immigrant status and having a regular doctor in Canadian adults.

Past research may provide hints to help explain the lower likelihood of having a regular doctor among new Canadian immigrants. For example, perceived cultural discrimination in the Canadian health care system was related to mistrust of providers and reluctance in accessing health care among Iranian adult immigrants who had, on average, lived in Canada for 7 years.³ A second study of Iranian adult immigrants revealed that many newcomers, given their lack of knowledge of the Canadian health

Table 2. Logistic regression, odds of having a regular doctor among adults in the Canadian Community Health Survey 2011–2012

Variable	Males	Females
	OR (95% CI)	OR (95% CI)
Immigrant status		
Non-immigrant	1.00	1.00
New immigrant (0–9 years)	0.43 (0.38–0.47)	0.36 (0.32–0.41)
Established immigrant (10+ years)	1.13 (1.03–1.24)	1.16 (1.03–1.30)
Age (years)		
18–24	1.00	1.00
25–34	0.60 (0.55–0.65)	1.09 (0.99–1.21)
35–44	1.04 (0.95–1.14)	1.60 (1.44–1.78)
45–54	1.82 (1.66–1.99)	2.26 (2.03–2.52)
55–64	2.84 (2.56–3.14)	3.01 (2.67–3.39)
BMI		
Normal weight	1.00	1.00
Underweight	1.06 (0.84–1.33)	0.88 (0.76–1.01)
Overweight	1.24 (1.17–1.32)	1.05 (0.97–1.14)
Obese	1.17 (1.08–1.26)	0.95 (0.87–1.05)
Race/ethnicity		
White	1.00	1.00
Visible minority	0.95 (0.88–1.02)	0.73 (0.67–0.81)
Education		
Post-secondary	1.00	1.00
<Post-secondary	0.87 (0.82–0.92)	0.95 (0.88–1.03)
Province of residence		
Ontario	1.00	1.00
Quebec	4.27 (3.99–4.58)	3.63 (3.34–3.96)
West	1.96 (1.83–2.10)	2.07 (1.90–2.26)
Prairies	1.72 (1.54–1.91)	2.04 (1.77–2.35)
East	4.05 (3.55–4.61)	3.64 (3.07–4.31)
Territories	0.37 (0.25–0.55)	0.35 (0.23–0.52)
Physical activity		
Active	1.00	1.00
Moderately active	0.93 (0.87–1.00)	0.93 (0.85–1.02)
Inactive	0.81 (0.76–0.86)	0.98 (0.91–1.07)
≥1 Chronic condition		
No	1.00	1.00
Yes	1.63 (1.54–1.72)	1.57 (1.46–1.68)
Self-rated health		
Excellent/very good/good	1.00	1.00
Fair/poor	0.91 (0.82–1.01)	1.05 (0.92–1.19)
# Children in household		
None	1.00	1.00
≥1	1.72 (1.61–1.84)	1.73 (1.59–1.88)

Note: BMI = body mass index; OR = odds ratio; CI = confidence interval; West = British Columbia, Alberta; Prairies = Saskatchewan, Manitoba; East = New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador; Territories = Yukon, Northwest, Nunavut.

care system, sought alternatives to a physician.²⁰ Problems finding a doctor upon arrival in Canada, poor geographic access to a physician, language difficulties (such as difficulty explaining health problems in official language, or understanding instructions provided by a doctor), and a lack of culturally appropriate care were also viewed as barriers in accessing a doctor among Canadian immigrants, of whom the majority were fairly new to Canada.¹⁹

Nevertheless, as new Canadian immigrants become more established in Canada and adapt to new social norms, they are more likely to access the health care system.¹⁶ At the same time, their health advantage deteriorates following arrival in Canada, leading to increased contact with a family physician.⁷ Two studies concluded that self-reported health status in established immigrants was worse than that in the Canadian-born population,^{9,29} one of them reporting that this was due to ongoing socio-economic difficulties, such as those related to income and employment.⁹ This could contribute to established immigrants

being slightly more likely to have a regular doctor than non-immigrants.

Our results showing that females were significantly more likely than males to have a regular doctor across all immigrant status categories add to the sparse existing literature evaluating this relationship separately in males and females. While a prior study found that the proportion of immigrants and non-immigrants in Canada having a family doctor was similar for males and females,¹⁶ a more recent study supports our results, concluding that female immigrants were more likely to have a regular doctor compared to males in Canada.¹⁵ Reasons for this may include women in general having worse self-reported health,^{30,31} a greater willingness to seek care and access preventive services when ill,^{30–32} more responsibility for the health care needs of family members,³¹ as well as the overall need for maternal care.^{31,32} Considering that immigrants experience a decline in their health advantage over time following arrival in a new country, facilitating early connections to medical care may be important in ensuring that medical conditions are not left undiagnosed and untreated. This could be especially important among men, who are in general less likely to have a regular doctor, but even more important among immigrant men, who are even less likely to have a doctor than their non-immigrant counterparts. Heightened public health efforts to this end have the potential to help maintain the health advantage of new Canadian immigrants in the long term.

Strengths and limitations

The current study uses a large dataset representative of the Canadian population to analyze the relationship between immigrant status and having a regular medical doctor. The results expand on those of previous studies that relied on older data, using a rich dataset allowing control for multiple relevant confounders and assessment of gender differences. The cross-sectional data mean that causality between immigrant status and having a doctor cannot be inferred, but the control for confounders, including health status, lends weight to our results. Another limitation involves the broad categories of the immigrant status variable (0–9 years vs. ≥ 10 years) provided by the CCHS, which do not allow for detailed analysis by length of residency. Further, while the CCHS overall response rate is close to 70%, it is possible that the response rate among immigrants would be lower, especially if they lack working knowledge of English or French for CCHS participation; however, response rate information on subgroups is not available. With respect to immigrants, more precise information regarding different groups of immigrants (e.g., refugees, economic) or their ethnicity is also not available, and these may be potentially important determinants of health status and service access.³³ Last, the use of self-reported data may lead to over- or underestimation of some covariates (e.g., physical activity, BMI). Future research should include further stratification of immigrant individuals according to length of residency (e.g., 1–3 years, 4–6 years, 7–9 years, etc.), as well as longitudinal follow-up of new immigrants examining determinants, inequities and changes over time in their access to primary health care. Qualitative research examining the health care experiences of immigrants would also yield applicable information to assist in formulating appropriate policies and programs for helping immigrants to locate a physician.

CONCLUSIONS AND IMPLICATIONS

There is a significant association between immigrant status and having a regular medical doctor among Canadian adults. Compared to non-immigrants, new immigrants are much less likely to have a regular doctor, while established immigrants are somewhat more likely to have a regular doctor. Women are more likely to have a doctor compared to men across all immigrant status categories. Policies and programs that assist in finding a doctor should target new immigrants, and investigate gender-specific impediments among this population when it comes to finding a doctor.

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RÉSUMÉ

OBJECTIF : Les nouveaux immigrants arrivent en général au Canada en meilleure santé que leurs homologues canadiens, mais ils perdent cet avantage au fil du temps. La difficulté de trouver un médecin peut y être pour quelque chose. Les études antérieures s'appuyaient sur des données plus anciennes et ne tenaient pas compte de nombreux facteurs confusionnels ni des différences entre les sexes. Nous avons évalué la relation entre le statut d'immigrant et le fait d'avoir un médecin attiré chez les adultes canadiens.

MÉTHODE : Les données transversales de l'Enquête sur la santé dans les collectivités canadiennes de 2011–2012 ont été autodéclarées par 73 958 répondants de 18 à 64 ans, qui représentaient >20 millions d'adultes canadiens. Nous avons analysé la relation entre le statut d'immigrant et le fait d'avoir un médecin à l'aide du χ^2 et d'analyses de régression logistique stratifiées selon le sexe. Nous avons également tenu compte de l'âge, de l'indice de masse corporelle, de la race, du niveau d'instruction, de la province de résidence, de l'activité physique, des états chroniques, de la santé autoperçue et du nombre d'enfants du ménage.

RÉSULTATS : Environ 77 % des hommes et 87 % des femmes ont déclaré avoir un médecin. Environ 7 % des répondants ont déclaré être de nouveaux immigrants au Canada (9 ans ou moins), tandis que 16 % étaient des immigrants établis (≥ 10 ans). Pour les hommes et les femmes respectivement, 78 % et 88 % des non-immigrants, 55 % et 68 % des nouveaux immigrants, et 84 % et 91 % des immigrants établis ont déclaré avoir un médecin ($p < 0,001$). Comparativement aux non-immigrants, les nouveaux immigrants étaient significativement moins susceptibles d'avoir un médecin (RC (IC de 95 %) hommes : 0,43 (0,38–0,47); femmes : 0,36 (0,32–0,41)), tandis que les immigrants établis étaient de manière significative plus susceptibles d'avoir un médecin (hommes : 1,13 (1,03–1,24); femmes : 1,16 (1,03–1,30)).

CONCLUSION : Les nouveaux immigrants canadiens sont moins susceptibles d'avoir un médecin attiré que les non-immigrants et devraient être ciblés par les politiques et les programmes qui facilitent la recherche d'un médecin.

MOTS CLÉS : Canada; santé des immigrants; effet de l'immigrant en bonne santé; soins de santé primaires; accessibilité des services de santé