

The Supply of Primary Care Physicians in Alberta 2018-2022 – A Dire Description

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ABSTRACT

In recent years, questions have surfaced about whether Alberta has a stable supply of primary care physicians (PCPs – family physicians [FP] and general practitioners [GP]). There is anecdotal evidence of some PCPs leaving the province to practice elsewhere, retire, or limit their practice. Community PCPs in Alberta have faced a number of challenges providing care for increasingly complex patients in a political environment that has made many consider practice options elsewhere. Demographic data from the College of Physicians and Surgeons of Alberta for all PCPs from 2018, 2020 and 2022 were analyzed and described. PCPs were reported by year, years in practice, country of medical school graduation and sex. From 2018 to 2022 the number of PCPs increased from 4949 to 5540. There was an increase in the number of PCPs 31+ years since medical school graduation from 1340 to 1446, representing a quarter of the workforce supply. However, the number of PCPs 0-5 years since medical school graduation declined from 592 to 476. The proportion of FPs who graduated from a Canadian medical school also declined 76.3% (2768) to 68.9% (3035). Over one quarter of the PCP workforce in Alberta is nearing retirement age. The decline in new PCPs (0-5 years since medical school graduation) entering practice offers evidence to support concerns of a growing deficit in primary care availability in this province.

Keywords: family physician, health human resources, workforce supply; retrospective analysis.

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INTRODUCTION

There is increasing concern about the supply of primary care physicians (PCPs – family physicians (FPs) and general practitioners (GPs) in Alberta. The population is not only growing, but also aging – meaning not only more patients but more PCP workload per patient. Anecdotal evidence suggests PCPs are leaving the province to practice elsewhere, retire, or limit their practice size. Details about the current supply of PCPs in AB are not widely known, but patient access to primary care remains limited in parts of the province.

The shortfall of PCPs in Alberta is part of a nationwide shortage that the Canadian Medical Association has termed "critical" (Canadian Medical Association, 2022). The alarm has been sounding for years; the Fraser Institute warned in 2011 (Esmail, 2011) that the shortage, already significant then, would worsen over the next decade, as indeed it has. Across Canada, it is estimated that over 4 million Canadians do not have a PCP, and this number is expected to rise significantly in the coming years (Statistics Canada, 2019). PCPs in Canada are growing older, many are offering fewer annual service days, and fewer are choosing to the enter the profession, leaving much uncertainty about how to re-supply the primary care workforce (The Canadian Post-M.D. Education Registry, 2022) (The College of Family Physicians of Canada, 2023) (McDonald, (forthcoming)) (Canadian Medical Association, 2019).

Our objective was to describe trends in the supply of PCPs in Alberta from 2018-22, both numerically and demographically, to help guide policymakers in Alberta and other provinces in addressing the concern noted above.

METHODS

Setting

The majority of PCPs entering practice each year in Canada are FPs: graduates of two-year postgraduate residency training programs, accredited by the College of Family Physicians of Canada, that are provincially based and funded (Canadian Residency Matching Service). Alberta's two largest Universities, the University of Calgary, and the University of Alberta, offer this training, with separate rural and urban streams at each university. Annually, the combined total of new FPs produced in Alberta by these programs is approximately one-hundred and fifty (Canadian Residency Matching Service, 2022). Most of these residency-trained FPs are graduates of Canadian medical schools, but a small number are international medical graduates (IMGs). An additional small number of IMGs are FPs who completed residencies outside Canada but recognized as equivalent by the College. A larger number, at times approximately 30% of the supply of PCPs (Canadian Institute for Health Information, 2021; College of Physicians and Surgeons of Alberta, 2021), are IMGs practicing as GPs, without recognized residency training.

The GP option remains available in Alberta for physicians who do not complete the Family Medicine certification exam, but who received their MD in Canada or the United States. Those from other countries are reviewed individually by the CPSA; depending on their credentials they may be eligible for a practice permit after completing a supervised practice-readiness assessment of several months' duration. Otherwise, they must compete for a limited number of residency training positions in Alberta.

This is a descriptive repeated cross-sectional enumeration of PCPs.

Data Source

Demographic data from the College of Physicians and Surgeons of Alberta (CPSA) for all PCPs on the general registry (GRFP – general register Family Practice, or FP, and GRGP – general registry General Practitioner, or GP) were included for the years 2018, 2020 and 2022. Physicians are required to confirm their demographic and practice information annually when paying their licence registration fee; hence the CPSA's registry is complete and current. PCPs were organized by year, years since medical school graduation, country of medical school graduation, sex and FP or GP designation.

Statistical Analyses

We present and compare descriptive data in counts, percentages, and interquartile ranges.

RESULTS

TABLE 1 presents the descriptive findings from 2018 to 2022. The total number of PCPs (GPs and FPs) increased, with the largest increase in the number of older family physicians (\geq 30 years since graduation). Of note, there was a decrease in the number of new FPs (0-5 years since graduation). Those 6-10 years since medical school graduation increased somewhat, as those previously in the 0-5 category aged into the 6-10 group but were under-replaced in the new-FPs group as noted above. The remaining categories showed interval increases.

The median number of years since medical school graduation was nearly unchanged, as declines at the high and low ends roughly balanced. The number of new graduate GPs (excluding FPs) was small and changed little over this same time interval, reflective of GP



designation being phased out. The GP cohort was considerably older than the FP cohort, with a median number of years since graduation of 32 to 33 years, as compared to 17 to 18 years in the FP cohort, and 67% to 71% over 26 years in practice compared to 28% to 29% of the FP group. The proportion of all PCPs entering the stage of late career 31+ years since medical school graduation accounted for approximate 26% to 29% of the entire primary care physician workforce.

Most FPs have graduated from Canada, but the proportion declined from 76.3% (2768) in 2018, to 72.8% (2877) in 2020 to 68.9% (3035) in 2022 (TABLE 1). The number of FPs from Canadian-similar (i.e., the United States, United Kingdom, Ireland, Australia, and New Zealand) training programs outside of Canada increased only from 3.9% to 4.8% of PCPs; the bulk of the increase in non-Canadian FPs was other international graduates. Among the GP group, most were internationally trained, with between 63% and 70% educated outside of Canada – mostly outside of Canadian-similar programs (TABLE 2) (See Appendix Table 3 and Table 4).

INTERPRETATION

Over a quarter of FPs and GPs in Alberta are nearing or into retirement age, and as younger cohorts age through the system they are being under-replaced by new entrants. As noted in the Introduction, the growing shortage of PCPs is Canada-wide; the importance of this work is to reveal how precariously the balance of supply hangs in Alberta – and perhaps in other provinces as well.

PCPs across Canada are faced with the challenge of providing care to increasing numbers of increasingly complex and older patients. The rising level of PCP burnout (only in part attributable to the COVID-19 pandemic) has both pushed practicing physicians to consider retiring and made primary care less attractive to new entrants (The College of Family Physicians of Canada, 2023). The Canadian Medical Association has reported that the percentage of Canadian medical graduates entering Family Medicine is declining, and our results appear to reflect this decline (Canadian Medical Association, 2022). These national trends are exacerbated in Alberta because of an antiquated predominantly fee-for-service payment model and an historical low point in physician-government relations (Lee J, 2020). In April 2019, the United Conservative Party won the Alberta election. From April 2019 to October 2022, Alberta saw the largest fall in public health care spending across Canada in 2021, decreasing 3.6%. (Alberta Federation of Labour, 2022; Canadian Institute for Health Information, 2021a), and the unilateral termination by government of the physician compensation agreement (Joannou, 2021). What followed was a low period in physician-government relations that led many practicing PCPs to consider practice options elsewhere (Lee J). Furthermore, exit surveys of recent graduates of Alberta-based Family Medicine training indicate that an unusually large number of potential new entrants are choosing to leave the province (Department of Family Medicine, 2021). With so many PCPs on the cusp of retirement and stressed, and with the pipeline running dry, Alberta is at risk for a wave of exits from practice that would make the shortage much worse very quickly.

Both in Alberta and across Canada, solutions will have to address three objectives: decrease or at least delay losses from practice, increase entry, and make more efficient use of physicians in practice. Approaches being widely discussed include changes in payment and incentives, changes in medical education, and increasing the influx of IMGs. Changes in medical education are aimed at reversing the above-noted decline in students choosing careers in Family Medicine.

Changes in payment and incentive structures can help retain existing physicians. More importantly, they are aimed at supporting a transformation to team-based models of care, reducing burnout, incorporating more nurse-practitioners and other health professionals, and making more efficient use of limited PCP numbers (Bahler B, 2021). Such models are also more attractive to students and may help to reverse that decline. Alberta lags most other provinces in alternative funding programs for primary care that provide support for interprofessional teams (Lange TC, 2020), but has recently launched a large-scale initiative to address that problem (Ministry of Health, 2022).

A policy change to streamline the evaluation and licensing of select IMGs was announced by the College and Physicians and Surgeons of Alberta in October 2022. The number of new FPs that will result from this initiative is unknown (College of Physicians and Surgeons of Alberta). The category of IMGs from schools in the US, UK, Ireland, Australia, and New Zealand contains a large percentage of Canadians trained abroad, and the currently small size of that group suggests opportunity for increase. Organisation for Economic Cooperation and Development (OECD) data reveal that large shares of the physician workforces of our peer nations are native citizens trained abroad, further suggesting the feasibility of that option for Canada (OECD, 2019).

CONCLUSION

With declining entry into primary care practice and the potential for a large wave of retirements, the supply of PCP service in Alberta is not only deficient but also quite precarious. Efforts to stabilize and improve supply as well as more efficiently use the existing workforce will be needed.



LIMITATIONS

The most important limitation of our study is that we have only numbers of physicians, not scopes of practice. If newly qualified PCPs are choosing limited scopes rather than continuity primary care practice, the impending deficit of PCP service may be greater than our numbers suggest. We also do not have information on the intended retirement dates of the older cohorts of PCPs.

Having data on only the three years (2018, 2020 and 2022 inclusive) is a limitation, but a small one. The history of supply is largely evident in the data on our older cohorts. We cannot distinguish between new entry and in-migration in our middle-aged and older cohorts, but that is not germane to our primary finding.

REFERENCES

Alberta Federation of Labour. (2022, February 03). Jason Kenney and the UPC cut health-care spending during the pandemic. https://www.afl.org/jason_kenney_and_the_ucp_cut_health_care_spending_during_the_pandemic.

Bahler B, A. E., Bhella V, Hilner J, Lee S., Myhr S, Potter T, La Rue J, Warren VM. (2021). The Integrated Health Neighbourhood of the Future: White Paper on Transforming Primary and Community-Based Care. <u>https://www.albertadoctors.org/Leaders-</u> Primary%20Care/primary-care-2030-white-paper-full-repor.pdf.

Canadian Institute for Health Information. (2021). Supply, Distribution and Migration pf Physicians in Canada, 2021 - Historical Data.

Canadian Medical Association. (2019). CMA Physician Workforce Survey. CMA. Retrieved December 21 from https://surveys.cma.ca/.

Canadian Medical Association. (2022, May 09, 2022). Critical family physician shortage must be addressed: CMA https://www.cma.ca/news-releases-and-statements/critical-family-physician-shortage-must-be-addressed-cma.

Canadian Residency Matching Service. Programs Descriptions - First Iteration. (2022). Retrieved December 21 from https://www.carms.ca/match/r-1-main-residency-match/program-descriptions/.

College of Family Physicians of Canada [CFPC] (2021). Family Physicians' Response to the COVID-19 Pandemic: Results of the May 2021 CFPC Members Survey on COVID-19. C. o. F. P. o. Canada. <u>https://www.cfpc.ca/CFPC/media/Resources/Research/COVID-19-Summary-May2021-ENG.pdf</u>.

College of Physicians and Surgeons of Alberta. (2021). Humanity of health care - CPSA in 2021 [Annual Report]. <u>https://cpsa.ca/wp-content/uploads/2022/11/CPSA-2021-annual-report.pdf</u>.

College of Physicians and Surgeons of Alberta. (2022). CPSA announces new pilot project to accelerate registration of internationally trained physicians. Retrieved December 21 from <u>https://cpsa.ca/news/cpsa-announces-new-pilot-project-to-accelerate-registration-of-internationally-trained-physicians/</u>.

Esmail, N. (2011). Canada's doctor shortage will only worsen in the coming decade. Fraser Institute https://www.fraserinstitute.org/article/canadas-doctor-shortage-will-only-worsen-in-the-coming-decade.

Joannou, A. (2021, 02 April 2021). How the Alberta doctors' contract dispute could impact the UCP government now and in the 2023 election. Edmonton Journal. <u>https://edmontonjournal.com/news/politics/alberta-doctors-dispute-ucp-kenney</u>.

Lange TC, C. T., Zwicker J, (2020). Primary Care Physician Compensation Reform: A Path For Implementation (The School of Public Policy Publication SPP Research Paper Issue.

Lee J, A. D. (July 20, 2020). Why a fight between Kenney and Alberta's doctors was inevitable, but the path to peace is less clear Social Sharing [Canadian Broadcasting Corporation Calgary News]. <u>https://www.cbc.ca/news/canada/calgary/alberta-kenney-doctors-government-1.5653948</u>.

McDonald, T., Schultz, S, Green, L. Lethebe, B, Glazier, R. ((forthcoming)). The Number of Family Physicians and Service Provision in Ontario and Alberta between 2005/06 and 2017/18: A Cross-Sectional Study. CMAJ-Open.

Ministry of Health, G. o. A. (2022). Modernizing Alberta's Primary Health Care System (MAPS). Government of Alberta. Retrieved December 21 from <u>https://www.alberta.ca/modernizing-albertas-primary-health-care-system.aspx</u>.

Organization for Economic Cooperation and Development [OECD]. (2019). International Migration of Doctors and Nurses. Retrieved 17 May 2023 from <a href="https://www.oecd-ilibrary.org/sites/4262706c-en/index.html?itemId=/content/component/component/compo

Statistics Canada, G. o. C. (2019). Health Fact Sheets Primary health care providers, 2019. https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm.



The Canadian Post-M.D. Education Registry. (2022). 2021-2022 Annual Census of Post-M.D. Trainees. https://caper.ca/sites/default/files/pdf/annual-census/2021-22-CAPER Census EN.pdf.

The College of Family Physicians of Canada. (2023). 2023 CaRMS Match Results. Retrieved 17 May 2023 from https://www.cfpc.ca/en/education-professional-development/2023-carms-match-results.

TABLES

TABLE 1 Count of GRFPs and C	GRGPs by years sin	ce medical school gra	duation Canadian d	or Canadian-similar m	edical school.		
	GRFP.2018	GRGP.2018	GRFP.2020	GRGP.2020	GRFP.2022	GRGP.2022	р
n	3629	1300	3954	1283	4402	1138	
Gender = Male (%)	1852 (51.0)	904 (69.5)	2007 (50.8)	878 (68.4)	2243 (51.0)	767 (67.4)	<0.00 1
Years Since Medical	17.00 [8.00,	33.00 [23.00,	17.00 [9.00,	32.00 [22.00,	18.00 [9.00,	33.00 [23.00,	<0.00
School Graduation (median [IQR])	27.00]	40.00]	27.00]	40.00]	27.00]	41.00]	1
Years Since Medical							<0.00
School Graduation (%)							1
0-5 years	591 (16.3)	1 (0.1)	485 (12.3)	0 (0.0)	475 (10.8)	1 (0.1)	
6-10 years	625 (17.2)	17 (1.3)	764 (19.3)	12 (0.9)	809 (18.4)	7 (0.6)	
11-15 years	477 (13.1)	118 (9.1)	540 (13.7)	121 (9.4)	672 (15.3)	67 (5.9)	
16-20 years	486 (13.4)	122 (9.4)	530 (13.4)	136 (10.6)	600 (13.6)	149 (13.1)	
21-25 years	435 (12.0)	113 (8.7)	497 (12.6)	143 (11.1)	569 (12.9)	131 (11.5)	
26-30 years	420 (11.6)	184 (14.2)	454 (11.5)	144 (11.2)	486 (11.0)	128 (11.2)	
31-35 years	279 (7.7)	201 (15.5)	305 (7.7)	204 (15.9)	376 (8.5)	182 (16.0)	
36+ years	316 (8.7)	544 (41.8)	379 (9.6)	523 (40.8)	415 (9.4)	473 (41.6)	
Country of Medical							<0.00
School Graduation (%)							1
Canada	2768 (76.3)	478 (36.8)	2877 (72.8)	411 (32.0)	3035 (68.9)	344 (30.2)	
Medical Schools Similar	143 (3.9)	132 (10.2)	183 (4.6)	113 (8.8)	212 (4.8)	90 (7.9)	
to Canadian ¹			. ,	. ,		. ,	
Other	718 (19.8)	690 (53.1)	894 (22.6)	759 (59.2)	1155 (26.2)	704 (61.9)	

[1] Medical schools similar to Canadian include those with English-language medical doctor programs with curricula and accreditation bodies very similar to Canada's; they include schools from the USA, UK, Australia, New Zealand and Ireland.

TABLE 2 Count of GRFPs and GRGPs by country of medical school graduation.									
	GRFP.2018	GRGP.2018	GRFP.2020	GRGP.2020	GRFP.2022	GRGP.2022			
Ν	3629	1300	3954	1283	4402	1138			
Country (%)									
Canada	2768 (76.3)	478 (36.8)	2877 (72.8)	411 (32.0)	3035 (68.9)	344 (30.2)			
United States of America	17 (0.5)	2 (0.2)	21 (0.5)	2 (0.2)	23 (0.5)	2 (0.2)			
United Kingdom	45 (1.2)	82 (6.3)	70 (1.8)	70 (5.5)	85 (2.0)	58 (5.1)			
Ireland	50 (1.4)	46 (3.5)	57 (1.4)	38 (3.0)	61 (1.4)	27 (2.4)			
Australia	30 (0.8)	1 (0.1)	34 (0.9)	2 (0.2)	42 (1.0)	2 (0.2)			
New Zealand	1 (0.0)	1 (0.1)	1 (0.0)	1 (0.1)	1 (0.0)	1 (0.1)			
Europe	84 (2.3)	59 (4.5)	92 (2.3)	53 (4.1)	102 (2.3)	45 (4.0)			
South Africa	153 (4.2)	376 (28.9)	174 (4.4)	389 (30.3)	209 (4.7)	364 (32.0)			
Africa	203 (5.6)	126 (9.7)	278 (7.0)	158 (12.3)	376 (8.5)	153 (13.4)			
Asia	88 (2.4)	49 (3.8)	116 (2.9)	61 (4.8)	177 (4.0)	56 (4.9)			
India	75 (2.1)	52 (4.0)	89 (2.3)	54 (4.2)	98 (2.2)	46 (4.0)			
Middle East	48 (1.3)	12 (0.9)	60 (1.5)	24 (1.9)	82 (1.9)	20 (1.8)			
Central America/Caribbean/Other	41 (1.1)	7 (0.5)	54 (1.4)	11 (0.9)	76 (1.7)	12 (1.1)			
South America	15 (0.4)	7 (0.5)	17 (0.4)	7 (0.5)	20 (0.5)	6 (0.5)			
Russia	10 (0.3)	2 (0.2)	13 (0.3)	2 (0.2)	14 (0.3)	2 (0.2)			
Fiji	1 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)			



TABLE 3 GRGPs and GRFPs by Canadian and all International Medical Schools and Years Since Graduation.

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	Canada.2018	International.2018	Canada.2020	International.2020	Canada.2022	International.2022	р
Ν	3246	1683	3288	1949	3379	2161	
Register = GRFP (%)	2768 (85.3)	861 (51.2)	2877 (87.5)	1077 (55.3)	3035 (89.8)	1367 (63.3)	< 0.001
Gender = Male (%)	1665 (51.3)	1091 (64.8)	1644 (50.0)	1241 (63.7)	1658 (49.1)	1352 (62.6)	< 0.001
Years Since Medical	19.60 (13.15)	25.90 (11.77)	19.72 (13.07)	25.56 (11.38)	19.49 (12.99)	25.25 (10.90)	<0.001
School Graduation (mean (SD))	19.00 (13.15)	25.90 (11.77)	19.72 (13.07)	25.50 (11.38)	19.49 (12.99)	25.25 (10.90)	<0.001
Years Since Medical							<0.001
School Graduation (%)							<0.001
0-5 years	567 (17.5)	25 (1.5)	467 (14.2)	18 (0.9)	447 (13.2)	29 (1.3)	
6-10 years	550 (16.9)	92 (5.5)	662 (20.1)	114 (5.8)	702 (20.8)	114 (5.3)	
11-15 years	354 (10.9)	241 (14.3)	394 (12.0)	267 (13.7)	477 (14.1)	262 (12.1)	
16-20 years	331 (10.2)	277 (16.5)	323 (9.8)	343 (17.6)	319 (9.4)	430 (19.9)	
21-25 years	307 (9.5)	241 (14.3)	318 (9.7)	322 (16.5)	322 (9.5)	378 (17.5)	
26-30 years	357 (11.0)	247 (14.7)	331 (10.1)	267 (13.7)	312 (9.2)	302 (14.0)	
31-35 years	297 (9.1)	183 (10.9)	304 (9.2)	205 (10.5)	311 (9.2)	247 (11.4)	
36+ years	483 (14.9)	377 (22.4)	489 (14.9)	413 (21.2)	489 (14.5)	399 (18.5)	
Country of Medical	0 (0.0)	1683 (100.0)	0 (0.0)	1949 (100.0)	0 (0.0)	2161 (100.0)	<0.001
School Graduation = International(%)	0 (0.0)	1005 (100.0)	0 (0.0)	1040 (100.0)	0 (0.0)	2101 (100.0)	0.001

Image: Probability of the stand	TABLE 4 GRGP and GRFPs by Canadian, Canadian Similar and Other Medical School and Years Since Graduation.										
Register = GRFP (%) GRP (%) 2768 (85.3) 143 (52.0) 718 (51.0) 2877 (87.5) 183 (61.8) 894 (54.1) 3035 (89.8) 212 (70.2) 125 (62.1) 0.001 Gender = Male (%) 1655 (51.3) 194 (70.5) 897 (87.7) 1644 (50.0) 193 (65.2) 1048 (63.4) 1658 (9.1) 188 (62.3) 1165 (62.6) 0.001 Vears Since Nedical 5.001 18.0 (7.0, 35.00 [14.0, 24.0 17.0 25.0 [13.8, 24.0 16.0 (8.0, 21.5 24.0 18.0 (2.0)		Canada.2018			Canada.2020			Canada.2022			р
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		3246	275	1408	3288	296	1653	3379	302		
Male (%) 1665 (S1.3) 194 (70.5) 897 (63.7) 1644 (S0.0) 193 (65.2) (63.4) 1658 (49.1) 188 (62.3) (62.6) <0.001 Wedical School 18.0 (7.0, 35.00 [14.0, 24.0 17.0 25.0 [13.8, 24.0 16.0 (8.0, 21.5 24.0 <0.001	GRFP (%)	2768 (85.3)	143 (52.0)	718 (51.0)	2877 (87.5)	183 (61.8)	, ,	3035 (89.8)	212 (70.2)	(62.1)	<0.001
School Graduation (median [10R]) 18.0 [7.0, 30.0] 35.00 [14.0, 42.0] 24.0 [17.0,32.0] 17.0 [8.0,30.0] 25.0 [13.8, 41.0] 24.0 [17.0,32.0] 16.0 (8.0, 30.0] 21.5 [13.0,40.0] 24.0 [18.0,32.0] <0.01 (median [10R])	Male (%) Years Since	1665 (51.3)	194 (70.5)	897 (63.7)	1644 (50.0)	193 (65.2)		1658 (49.1)	188 (62.3)		<0.001
Graduation (%) Gradu	School Graduation (median [IQR]) Years Since	• •	. ,					• •			<0.001
0-5 years 567 (17.5) 13 (4.7) 12 (0.9) 467 (14.2) 10 (3.4) 8 (0.5) 447 (13.2) 9 (3.0) 20 (1.1) 6-10 years 550 (16.9) 33 (12.0) 59 (4.2) 662 (20.1) 46 (15.5) 68 (4.1) 702 (20.8) 45 (14.9) 69 (3.7) 11-15 years 354 (10.9) 28 (10.2) 213 (15.1) 394 (12.0) 37 (12.5) 230 (13.9) 477 (14.1) 44 (14.6) 218 (11.7) 16-20 years 331 (10.2) 22 (8.0) 255 (18.1) 323 (9.8) 31 (10.5) 312 (18.9) 319 (9.4) 48 (15.9) 382 (20.5) 21-25 years 307 (9.5) 10 (3.6) 231 (16.4) 318 (9.7) 26 (8.8) 296 (17.9) 322 (9.5) 31 (10.3) 347 (18.7) 26-30 years 357 (11.0) 12 (4.4) 235 (16.7) 331 (10.1) 11 (3.7) 256 (15.5) 312 (9.2) 19 (6.3) 283 (15.2) 31-35 years 297 (9.1) 22 (8.0) 161 (11.4) 304 (9.2) 14 (4.7) 191 (11.6) 311 (9.2) 91 (3.5) 304 (16.4)	Graduation										<0.001
School < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < < << < << < < < < < < < < < < < < < < < < < << <td>0-5 years 6-10 years 11-15 years 16-20 years 21-25 years 26-30 years 31-35 years 36+ years Country of</td> <td>550 (16.9) 354 (10.9) 331 (10.2) 307 (9.5) 357 (11.0) 297 (9.1)</td> <td>33 (12.0) 28 (10.2) 22 (8.0) 10 (3.6) 12 (4.4) 22 (8.0)</td> <td>59 (4.2) 213 (15.1) 255 (18.1) 231 (16.4) 235 (16.7) 161 (11.4)</td> <td>662 (20.1) 394 (12.0) 323 (9.8) 318 (9.7) 331 (10.1) 304 (9.2)</td> <td>46 (15.5) 37 (12.5) 31 (10.5) 26 (8.8) 11 (3.7) 14 (4.7)</td> <td>68 (4.1) 230 (13.9) 312 (18.9) 296 (17.9) 256 (15.5) 191 (11.6)</td> <td>702 (20.8) 477 (14.1) 319 (9.4) 322 (9.5) 312 (9.2) 311 (9.2)</td> <td>45 (14.9) 44 (14.6) 48 (15.9) 31 (10.3) 19 (6.3) 11 (3.6)</td> <td>69 (3.7) 218 (11.7) 382 (20.5) 347 (18.7) 283 (15.2) 236 (12.7)</td> <td></td>	0-5 years 6-10 years 11-15 years 16-20 years 21-25 years 26-30 years 31-35 years 36+ years Country of	550 (16.9) 354 (10.9) 331 (10.2) 307 (9.5) 357 (11.0) 297 (9.1)	33 (12.0) 28 (10.2) 22 (8.0) 10 (3.6) 12 (4.4) 22 (8.0)	59 (4.2) 213 (15.1) 255 (18.1) 231 (16.4) 235 (16.7) 161 (11.4)	662 (20.1) 394 (12.0) 323 (9.8) 318 (9.7) 331 (10.1) 304 (9.2)	46 (15.5) 37 (12.5) 31 (10.5) 26 (8.8) 11 (3.7) 14 (4.7)	68 (4.1) 230 (13.9) 312 (18.9) 296 (17.9) 256 (15.5) 191 (11.6)	702 (20.8) 477 (14.1) 319 (9.4) 322 (9.5) 312 (9.2) 311 (9.2)	45 (14.9) 44 (14.6) 48 (15.9) 31 (10.3) 19 (6.3) 11 (3.6)	69 (3.7) 218 (11.7) 382 (20.5) 347 (18.7) 283 (15.2) 236 (12.7)	
Canada 3246 (100.0) 0 (0.0) 0 (0.0) 3288 (100.0) 0 (0.0) 3379 (100.0) 0 (0.0) 0 (0.0) Medical School 0 (0.0) 275 (100.0) 0 (0	School Graduation										<0.001
School $0(0.0)$ $275(100.0)$ $0(0.0)$ 1859 Other $0(0.0)$ 1408 $0(0.0)$ 1653 $0(0.0)$ $0(0.0)$ 1859	Canada	3246 (100.0)	0 (0.0)	0 (0.0)	3288 (100.0)	0 (0.0)	0 (0.)	3379 (100.0)	0 (0.0)	0 (0.0)	
Other $0(0.0)$ 1408 $0(0.)$ 1653 1653 $0(0.0)$ $0(0.)$ 1859		0 (0.0)	275 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	302 (100.0)	0 (0.0)	
		0 (0.0)	0 (0.0)		0 (0.)			0 (0.0)	0 (0.)		