

# Biopsy of Canada's family physician shortage

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## ABSTRACT

Family physicians provide comprehensive care for the community and are an integral part of the healthcare system. Canada is experiencing a shortage of family physicians, driven in part by overbearing expectations of family physicians, limited support and resources, antiquated physician compensation, and high clinic operating costs. An additional factor contributing to this scarcity is the shortage of medical school and family medicine residency spots, which have not kept pace with population demand. We analysed and compared data on provincial populations and numbers of physicians, residency spots and medical school seats across Canada. Family physician shortages are the highest in the territories (>55%), Quebec (21.5%) and British Columbia (17.7%). Among the provinces, Ontario, Manitoba, Saskatchewan and British Columbia have the fewest family physicians per 100 000 persons in the population. Among the provinces that offer medical education, British Columbia and Ontario have the fewest medical school seats per population, while Quebec has the most. British Columbia has the smallest medical class size and the least number of family medicine residency spots as a function of population, and one of the highest percentages of provincial residents without family doctors. Paradoxically, Quebec has a relatively large medical class size and a high number of family medicine residency spots as a function of population, but also one of the highest percentages of provincial residents without family doctors. Possible strategies to improve the current shortage include encouraging Canadian medical students and international medical graduates to consider family medicine, and reducing administrative burdens for current physicians. Other steps include creating a national data framework, understanding physician needs to guide effective policy changes, increasing seats in medical schools and family residency programmes, providing financial incentives and facilitating entry into family medicine for international medical graduates.

## BACKGROUND

Family physicians (FPs) provide high-quality, comprehensive and continuous care often as the first point of contact for members of the community. FPs improve population mortality by providing crucial preventive care, screening and monitoring. Every additional FP per 10 000 people increases life expectancy 51.5 days and reduces cardiovascular, cancer and respiratory mortality by 0.9%, 1% and 1.4%, respectively.<sup>1</sup> Although

FPs constitute a central role in the healthcare system, there is a significant shortage of FPs in Canada: one in five Canadians does not have a regular FP, and according to the Canadian Medical Association, Canada's physician-to-population ratio ranks 29th out of 36 high-income nations. In this analysis, we evaluate the scope of the disparity across Canadian provinces and territories, using a quantitative approach with qualitative strategies and insights to stimulate discussion and spur action.

Provincial government decisions in the 1990s, when politicians reacted to the 1991 Barer-Stoddart Report, coupled with the erroneous belief that a surplus of FPs with overly generous wages was wasting taxpayer dollars, have served to shape the current Canadian healthcare crisis. These policies led to the curtailing of medical school seats, reduced family medicine (FM) residency positions and a dramatic increase in barriers to access for international medical graduates (IMGs) aiming to practice in Canada. This reduction of the workforce, compounded by the stagnation of wages, inflation and a decrease in government investment in primary care at the federal and provincial levels, have all contributed to today's shortage of FPs in Canada.

Fewer FPs to care for our growing and ageing population, coupled with increased patient care complexity and a higher prevalence of chronic health issues, will result in reduced patient access to care, worse patient outcomes and further stressors on our healthcare system.<sup>2</sup> Without timely access to community care, patients often resort to more costly emergency departments, straining these resources further, which leads to an overwhelmed healthcare system that exacerbates physician burn-out and encourages early exit from the workforce. Of further concern, a significant percentage of Canada's ageing workforce of FPs is nearing retirement, with up to 20% of FPs planning to retire in the next 5 years.<sup>3</sup> With fewer medical graduates choosing FM, this trend will only serve to further exacerbate the FP shortage. More FPs



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**Table 1** Distribution of FP, MS spots (per year), medical school enrolment by the province of residence (per year), FMR positions (per year) by province and territories in Canada (2019)

Province or territory	Population	Without FP (%)	No of FP	Population per FP	No of MS spots	Population per MS spot	FMR positions offered (vs unfilled)	Population per FMR position
Canada	38 929 902	14.5	44 584	873	2972	13 099	1399 (219)	27 827
AB	4 543 111	14.9	5758	789	338	13 441	139 (32)	32 684
BC	5 319 324	17.7	6366	836	288	18 470	122 (1)	43 601
MB	1 409 223	15.8	1519	928	110	12 811	42 (5)	33 553
NB	812 061	10.2	1153	704	NP	NP	NP	NP
NL	525 972	12.5	927	567	80	6575	35 (2)	15 028
NS	1 019 725	14.4	1292	789	125	8158	58 (8)	17 581
PE	170 688	14.9	174	981	NP	NP	NP	NP
ON	15,109,41	9.4	14 962	1010	988	15 293	440 (59)	34 340
QC	8 695 659	21.5	10 909	797	943	9221	511 (99)	17 017
SK	1 194 803	17.2	1395	856	100	11 948	52 (13)	22 977
YK	43 789	NA	NA	NA	NP	NP	NP	NP
NT	45 605	55*	NA	NA	NP	NP	NP	NP
NU	40 526	75*	NA	NA	NP	NP	NP	NP
Territories†	129 920	NA	129	1007	NP	NP	NP	NP

Cells coloured in red represent data that reflect the worst patient burden or FP shortage.

Cells coloured in gray represent data that are not available (NA), or provinces/territories that do not administer medical education programs (NP).

\*Without access to a regular medical practitioner (either a family physician, a nurse or a medical specialist).

†Data on the Canadian territories (YK, NT, NU) are limited due to their dispersed population and the harsh and remote geographic environment situated in the northern region of Canada; some measures are only available for the three jurisdictions combined.

AB, Alberta; BC, British Columbia; FMR, family medicine residency; FP, family physician; MB, Manitoba; MS, medical student; NA, not available; NB, New Brunswick; NL, Newfoundland; NP, no programme; NS, Nova Scotia; NT, Northwest Territories; NU, Nunavut; ON, Ontario; PE, Prince Edward Island; SK, Saskatchewan; Territories, Yukon, Northwest Territories, Nunavut; YK, Yukon.

are also abandoning traditional community care—with its high overhead costs and administrative burdens—and instead tailoring their practices to focused areas, higher-income fields, or hospital work with better compensation, lower or no overhead and team infrastructure, which consequently removes them from the front lines of community-based primary care.

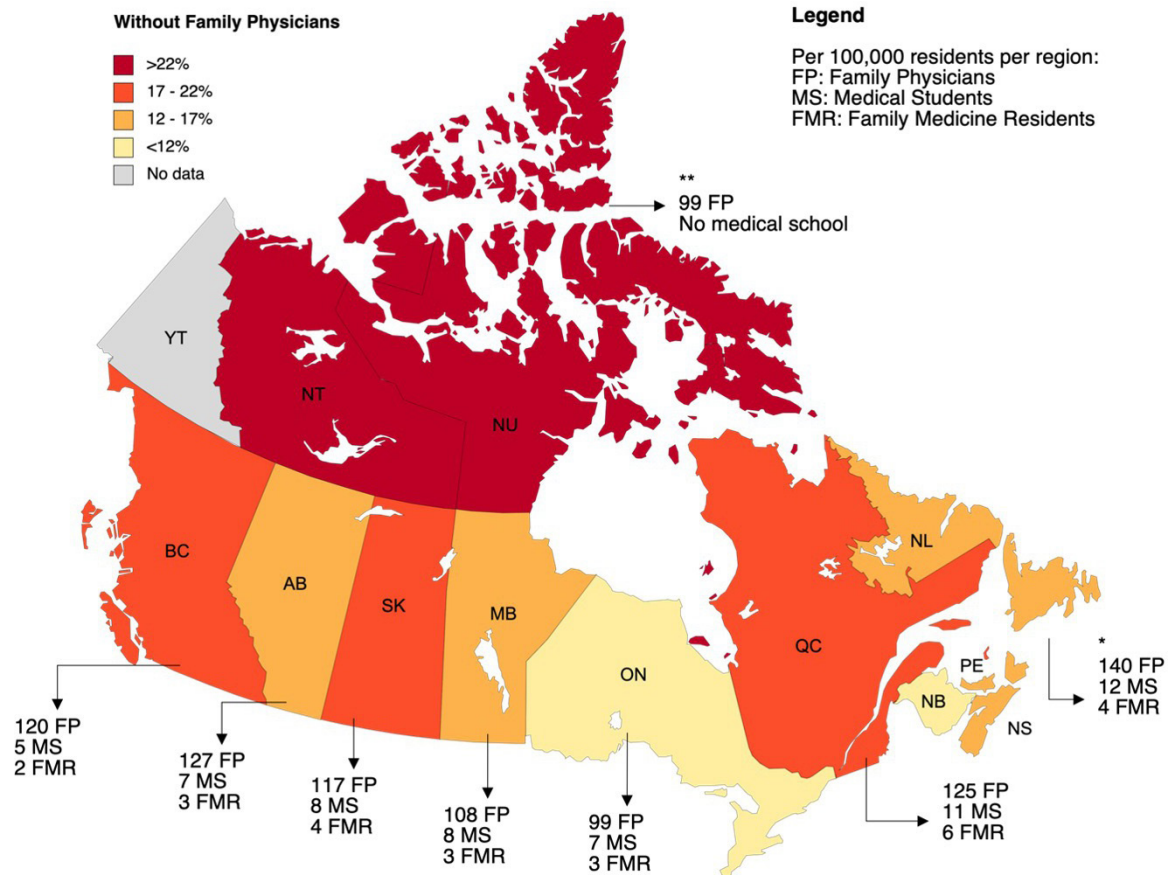
## METHODS

The latest data for all metrics was used and tabulated by province and territory in [table 1](#) and [figure 1](#). Statistics Canada was used to identify populations (2022 Q3) across Canadian jurisdictions and the percentage of provincial residents without a family doctor. The Canadian Physician Demographics and Supply Archive was used to identify the number of FPs per province (2019). The Association of Faculties of Medicine of Canada—Canadian Medical Education Statistics report (2020–2021 cycle) was used to identify the number of seats for medical schools across Canada. Canadian Residency Matching Services 2022 R1 match data report was used to identify the number of FM residency spots in different provinces.

## RESULTS

As the Canadian medical system is primarily administered provincially, shortages of FPs vary dramatically by jurisdiction, and these shortages are partially related to regional numbers of medical student seats and unfilled FM residency positions. The latest data on the distributions of FPs (2019), medical school seats (2020) and FM residency spots (2022) are demonstrated by province and territory in [figure 1](#) and [table 1](#). Together, the Prairie and Atlantic provinces trend close to the national average for the numbers of FPs and medical school seats per capita. By contrast, the rural Canadian Territories have the highest percentage of the population without access to a regular medical practitioner (defined as an FP, a nurse or a medical specialist).

British Columbia (BC), one of the most populous provinces in Canada with only one medical school, has one of the highest rates of provincial residents without FPs, and only offers 5 medical school seats per 100 000 provincial residents, with 40 new seats to be instated in 2023. However, despite adding these seats, BC will still have the least seats per capita among provinces that administer medical education. BC also has the least FM residency positions per capita, and these spots are among the highest in demand in Canada: in



**Figure 1** The percentage of the population without a family physician and the concentration of family physicians, medical students (per year), and family medicine residents (per year) across Canada. \*The data are presented for the four Atlantic provinces combined: New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island. \*\*The data are presented for the three territories combined: Northwest Territories, Nunavut and Yukon, and represent the percentage of the population without access to a regular medical practitioner (either a family physician, a nurse or a medical specialist), given the unique geographical challenges that the territories face and the limited data that is available. AB, Alberta; BC, British Columbia; MB, Manitoba; NB, New Brunswick; NL, Newfoundland; NS, Nova Scotia; PE, Prince Edward Island; ON, Ontario; SK, Saskatchewan; YK, Yukon; NT, Northwest Territories; NU, Nunavut; Territories: Yukon, Northwest Territories, Nunavut; N/A, Not applicable.

2022, only 1 FM spot of 122 in BC went unfilled. In contrast, Ontario and New Brunswick have the lowest percentage of provincial residents without FPs. Ontario and Quebec offer the highest number of medical school seats, and have the highest absolute number of FM residency positions per year, although a significant percentage go unfilled each year. The lack of access to community FPs in QC is the most prominent in Canada, with more than one in five Quebecers without a regular FP. Finally, the Canadian Territories of Nunavut, Northwest Territories and Yukon, face significant challenges in accessing healthcare due to their isolated geography and dispersed population, resulting in the highest percentage of the population without access to a regular medical professional.

## DISCUSSION

Short-term solutions to the FP shortage in Canada include reducing barriers to practice for IMGs to bridge critical gaps in FP coverage, applying financial incentives to

attract new graduates to FM, and providing much-needed administrative support to current physicians. Encouraging IMGs to apply for FM residencies, while opening additional IMG-specific FM residency slots and new pathways for IMG entry to practice, could reduce the backlog of more than 1200 IMGs living in Canada in 2022, waiting to practice medicine and serve the Canadian populace. Mobilising IMGs to quickly enter the medical workforce via streamlining certification requirements, supervised practice agreements, physician-assistant training programmes or medical officer roles, similar to the IMG-entry system in Australia, could potentially help alleviate the shortage of available FP labour in Canada.<sup>4</sup> In addition, adding financial incentives may attract medical graduates to FM: BC recently implemented incentives for new FM practices—including guaranteed starting pay, signing bonuses and loan forgiveness—and announced a new payment model to better compensate case complexity, time demand, patient load and administrative burden.

In particular, billing for administrative work may financially incentivise physicians, who spend up to 2 hours on administrative work for every hour spent on direct patient care.<sup>5</sup>

Long-term strategies include increasing the number of medical graduates and FM residency slots, mobilising FPs to underserved regions, and establishing FM-specific entry streams. In 2022, BC and ON announced small increases in medical school seats and FM residency slots; however, recent projections suggest they may not be sufficient to compensate for the expected increases in retiring FPs.<sup>3</sup> Plans for a new medical school at Simon Fraser University, in BC, have stalled and are unlikely to produce graduates before 2030.<sup>6</sup> To increase the numbers of FM-interested medical graduates, provinces might consider FM-specific streams within pre-existing medical schools, or FM-focused medical schools, similar to Jichi Medical School in Japan, which trains FPs with a focus on underserved and rural areas, and offers competitive financial aid and student loan forgiveness programmes to encourage students to follow a career in FM.<sup>7</sup>

Finally, the creation of a national data collection framework is needed to quantify the need for, and facilitate the distribution and mobility of, FPs across the country. Currently, no such national data system exists to track the location and scope of FPs, making it difficult to precisely appraise the extent of the problem and create evidence-based policy changes. This may involve (1) surveying and interviewing FPs to identify barriers, administrative burdens and inefficiencies in providing patient care, (2) monitoring FP burn-out and workload to prioritise areas for support and resources and (3) evaluating the effectiveness of interventions to improve patient access to care and support for FPs. A national data collection framework would also help appropriately allocate limited resources and policy-maker attention to the most at-risk areas.

## CONCLUSION

The latest data and trends clearly suggest that the FP shortage will continue to worsen accessibility to FPs and specialists, resulting in longer delays and an increased burden on our healthcare system. Rising burn-out and retirement of FPs will further exacerbate the current FM crisis until significant changes are made to the system. The FP shortage must be addressed both by provincial and federal governments as well as medical faculties and FP organisations, by increasing access to careers in FM for Canadian MDs and IMGs, and overhauling outdated administrative and physician compensation models to better support FPs. For Canadian provinces with high numbers of provincial residents without FPs, revisiting

increases in medical school seats and FM residency slots to achieve parity with the Canadian average may also be necessary to alleviate long-term stresses in the healthcare sector. Most importantly, concrete action plans involving timelines, outcome measures and milestones need to be implemented to ensure these strategies are successful, which will require engagement with government, policy-makers, patients and front-line healthcare workers.

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