Family Physician Shortage: A Canadian Healthcare Crisis

2023 Map the System
Written Summary of Research

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Problem Statement

6 million

Canadians without a family physician

Over the past 20 years, Canadians have been struggling to find a family physician. In 2022, 6 million Canadian adults didn't have access to a family physician with a predicted shortage of 31,680 family physicians by 2028.[1]

Patients without a family physician are **three times more likely to experience worsening health,** with many turning to an emergency department (ED) for care.[2] In Alberta, 46% of patients visited the ED because they couldn't see another physician in time.[3] With an increased demand for emergency care in Canada, the wait time to see an emergency physician increased from 1 to 4 hours and the wait time for admission is up to 40 hours.[4,5] With such strained resources, **deaths during the long wait in the ED have occurred**.[6]

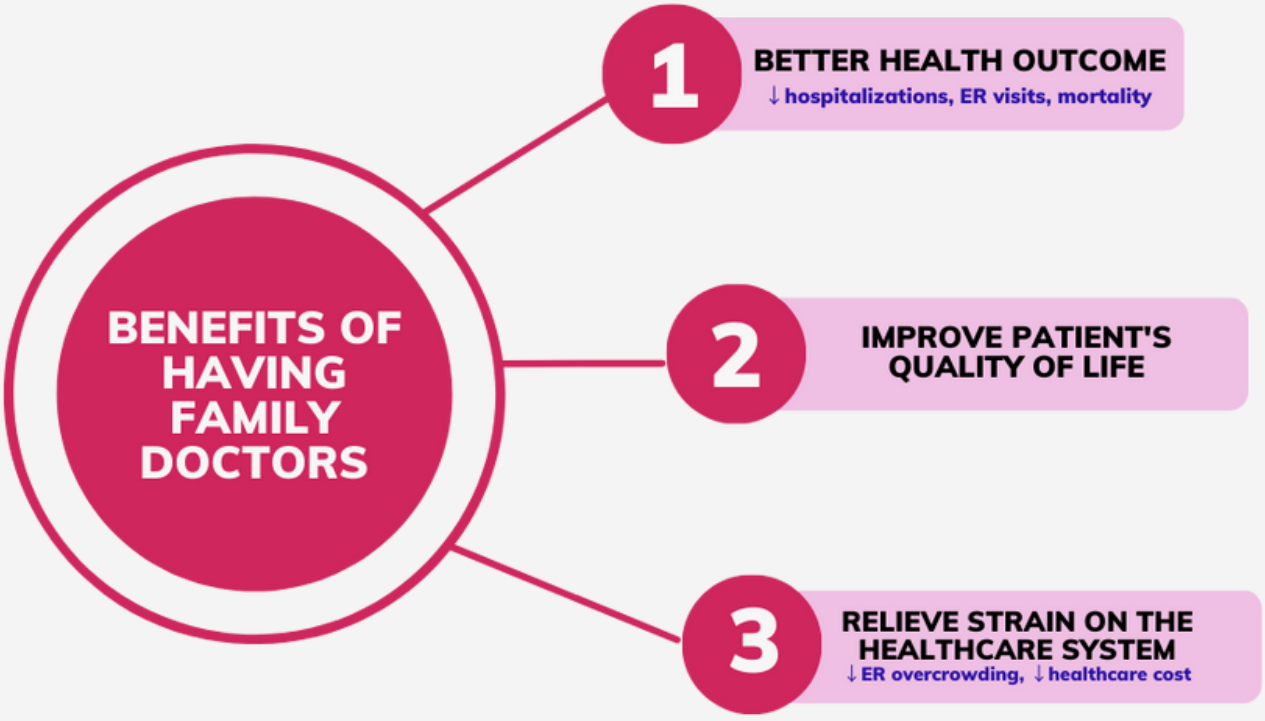
"We hear patients complaining about not having a family doctor at least 2-3 times a day"
- Calgary Pharmacy Technician

"I've been trying to find a family doctor for me and my daughter over the past 3 months, no clinic would take us in"
- Calgary Patient

Primary Care in Canada

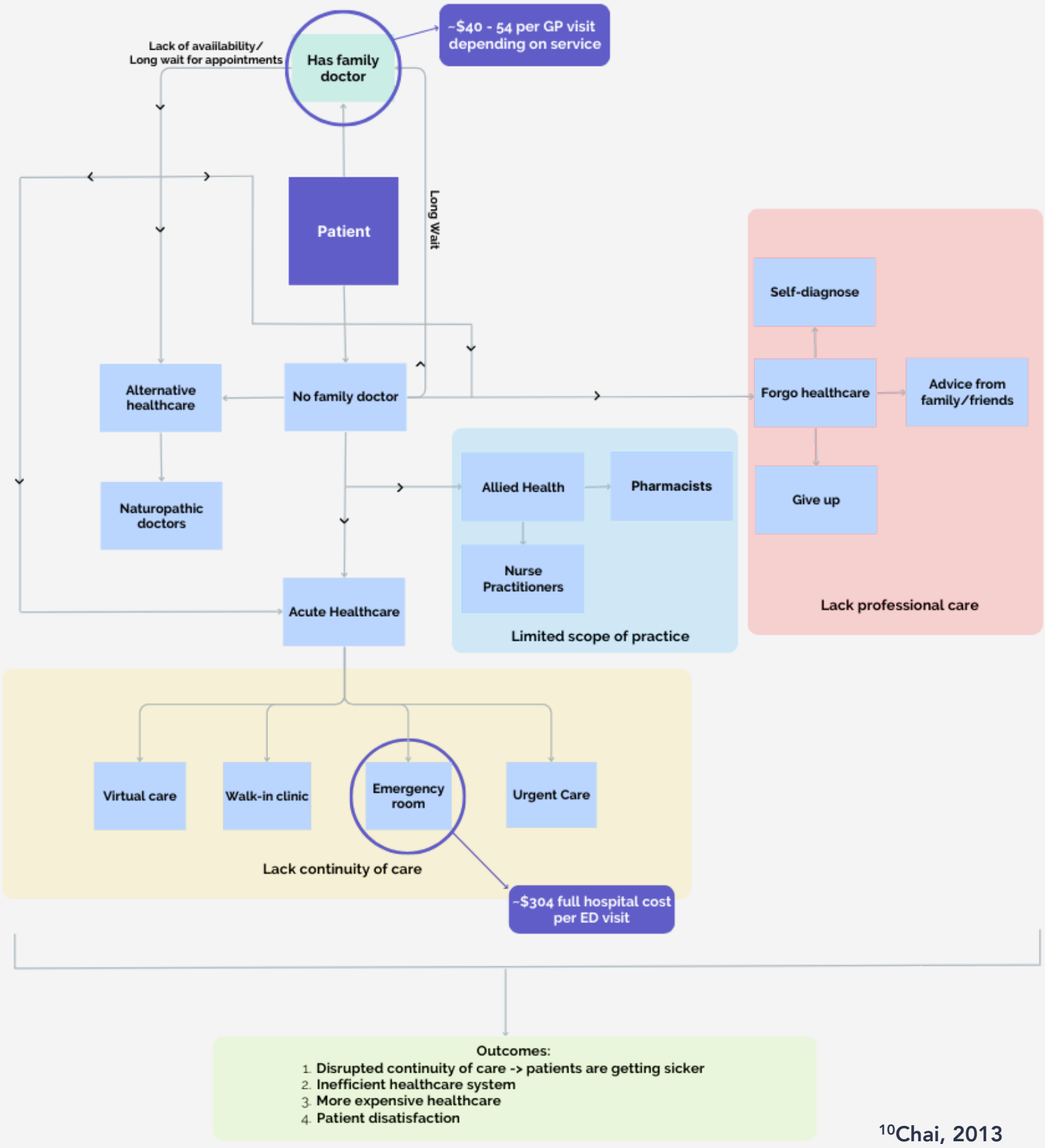
"The primary objective of Canadian health care policy is to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers.[7]"

Primary care provided by family doctors in Canada is an essential part of the Canadian healthcare system. Quality primary care increases personal satisfaction and prevents/reduces exacerbations of illness such as heart failure and diabetes which could require costly hospital care.[8,9] Unfortunately for those without a family physician, **35% have spent over a year searching, while 29% have given up**.[2]



Patient's journey

What are patient's options facing a family physician shortage in Canada?

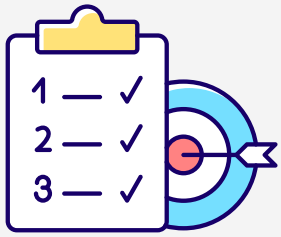


[10]Chai, 2013
[11]CIHI, 2020

Purpose and Scope

There are many factors that affect one's access to primary care, ranging from finance to scientific research and societal attitudes. For example, rural patients are sicker with 8% of physicians caring for 18% of Canadians living in rural areas.[12] Some places, including some urban sites, don't have after-hours care such as an evening or weekend walk-in clinic.[13] Socioeconomic status is another important factor as having a family physician is less common for those making < $30,000 annually, under 34 years old, and who are of First Nations or South East Asians descent.[13]

Given the various factors and types of primary care providers found in our preliminary review, we decided to focus our scope on the main providers of primary care in Canada: family doctors.



Research Methods

To create this document, we reviewed academic journals, news articles, social media and opinion pieces. We also examined data provided by government, regulatory bodies and non-profit organizations. Finally, we had the pleasure to talk to a variety of stakeholders, including 2 physicians, 2 nurses, 3 pharmacists, 1 pharmacy technician and 5 patients.

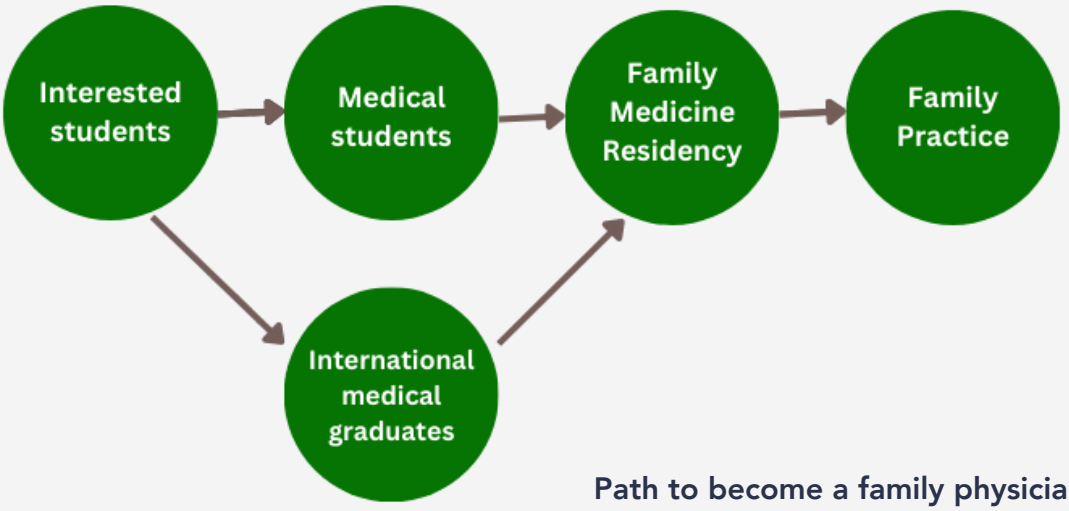
Problem Landscape

Medical Education

Becoming a physician starts with medical school. If a Canadian medical graduate wishes to become a family physician, they apply and complete a 2 year residency program in family medicine before becoming fully licensed as a family physician in Canada. Medical graduates who trained outside of Canada and the United States, referred to as international medical graduates (IMGs), can also apply for government-funded Canadian medical residency positions, but these spots are limited.

Canadian Government

Provincial governments determine the number of medical students and residents trained each year as they subsidize domestic medical student tuition and fund residency positions, paying over $350,000 per family physician trained.[14-16] If the number of medical students increases without increasing residency spots, some medical graduates may not be able to become fully licensed physicians.[18] Provincial governments also fund local health authorities that run hospitals and pay physicians and allied health professionals for their services. The federal government helps to fund provincial healthcare and sets healthcare policy through government agencies such as Health Canada and Public Health Agency of Canada.



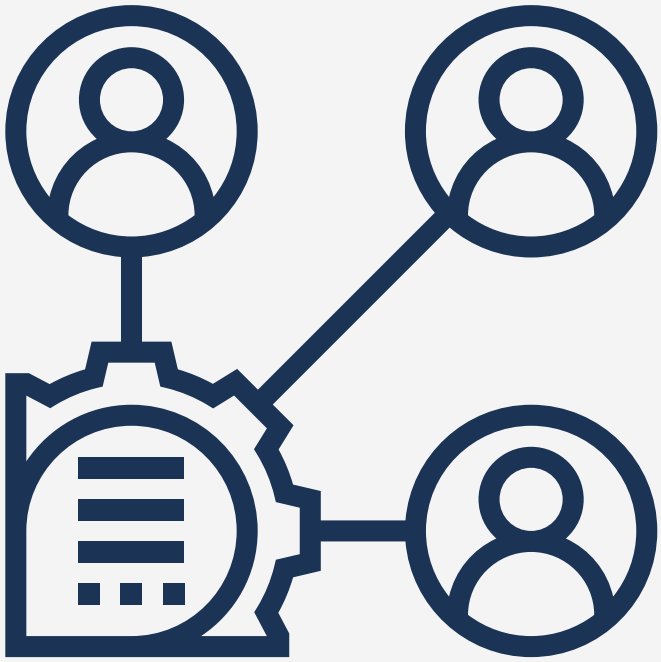
Path to become a family physician

Healthcare Professionals

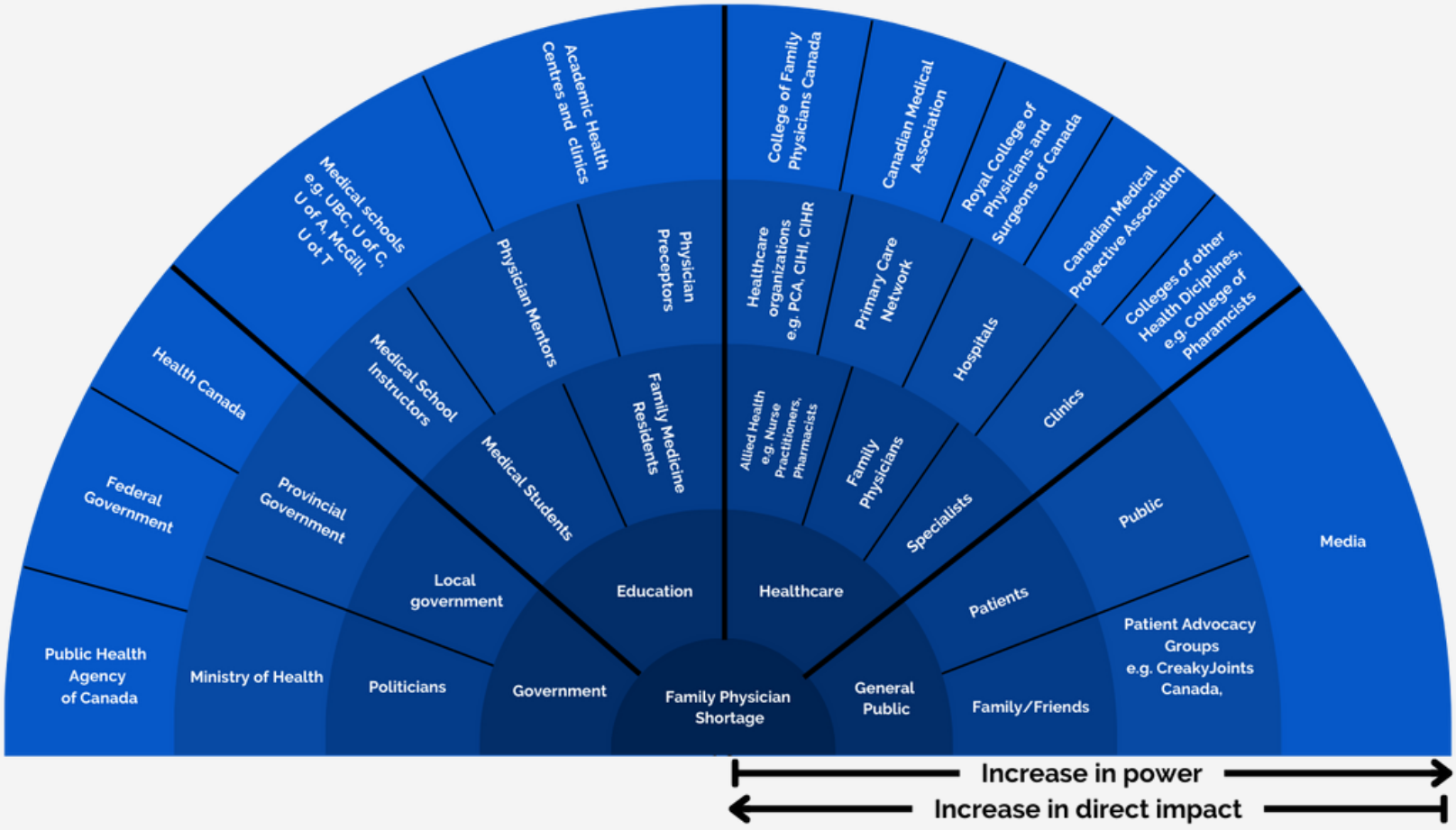
Primary care includes the prevention, diagnosis, counseling and treatment of common illnesses, referrals to specialized services, etc. A successful primary care team should include family physicians along with other healthcare professionals, such as nurses, pharmacists, dieticians and physiotherapists.[18,19] A shortage in family physicians means that other healthcare professionals will need to fill the gap to continue offering optimal primary care to patients; otherwise, the public health system could be overwhelmed and collapse.

General Public

Media and patient advocacy groups reflect public concerns about healthcare. They are vital to public health awareness, advocating for improved policies and efficiency of the healthcare systems for patients. A shortage in family physicians ultimately affects the patients and their family and friends. The widespread media coverage on this issue can let patients voice their views and concerns which can spark policy changes, such as the increase in remuneration for British Columbia (BC) physicians in 2022.

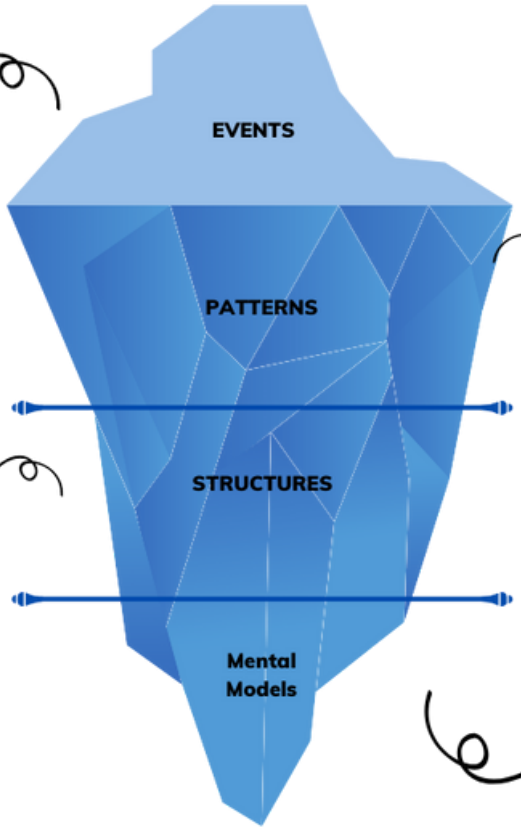


Stakeholder Map



The Family Physician Shortage Iceberg

Identifying the deep rooted mental models underlying this healthcare crisis



- Long waits to see family physician
- Patients cannot find a family physician
- ↑ ER and Urgent Care visits and ↑ waits during visits
- Strained healthcare systems

- Shortage in family physicians
- Physician burnout
- Decreased family physician clinic operating hours
- Increased family physician workload and expectations
- Increase in patient complexity

Government
- Lack of administrative support, lack of funding for residency training spots, stagnant payment model
- Lack of funding for allied health and health promotions (including preventative health)

Family physicians
- Wanting work-life balance
- Desire to change practice style and provide specialized services

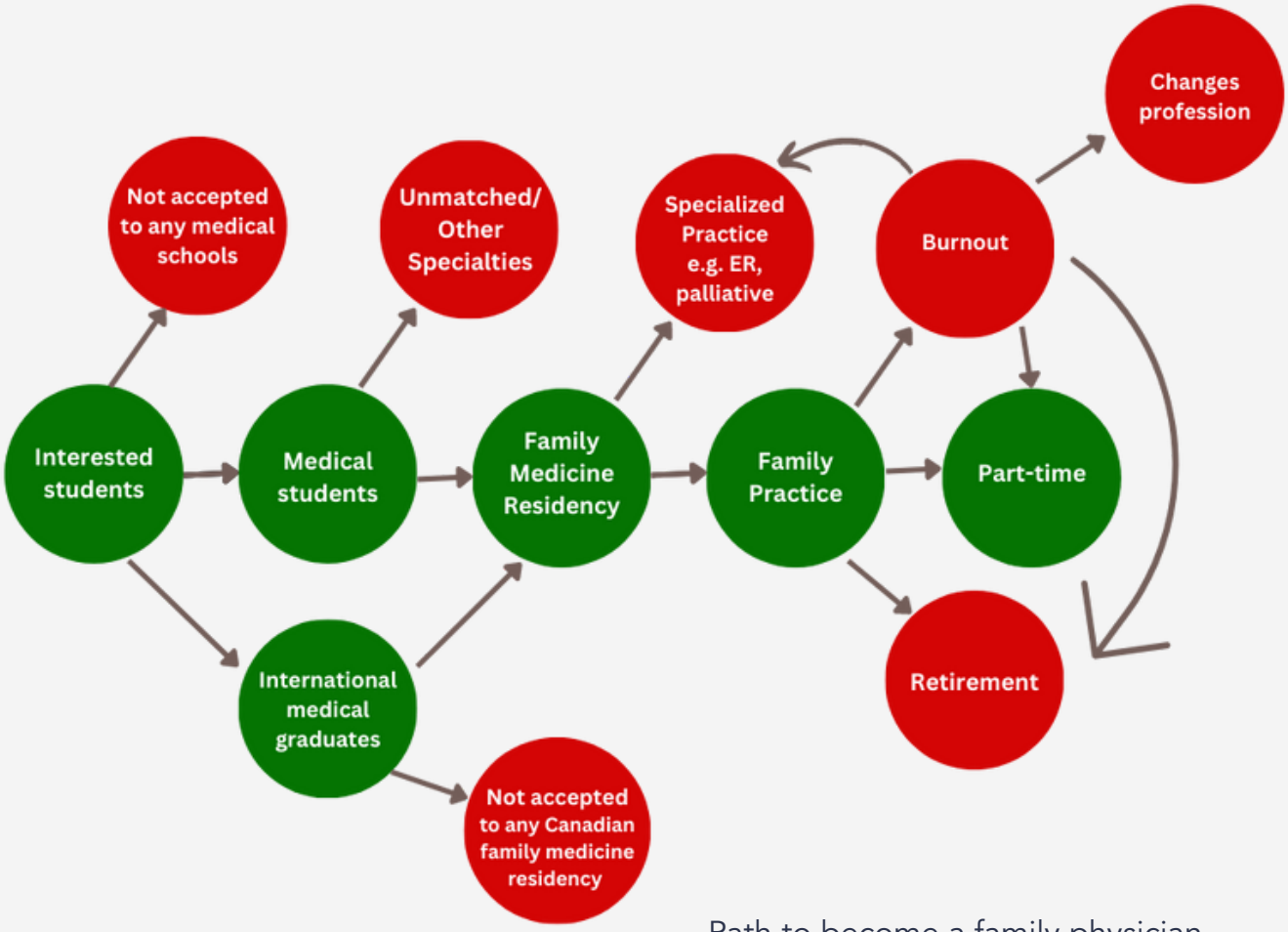
Medical students
- Lack of interest in becoming a family physician

Deep rooted beliefs
- Family physicians are not as valuable as specialists
- All physicians are over-paid
- Canada doesn't have the capacity to train more doctors
- It's hard to change the healthcare system because it is too complex
- Societal expectations to see a family physician in a timely manner despite their workload
- People valuing preventative health and healthy habits less than acute care

Root causes

1. Lack of funding for medical trainees

Since the provincial government funds medical students and residents trained in Canada, the total number of available positions is limited by government funding. Canadian medical schools accept < 3000 students each year, which is 3-18% of eligible applicants.[1,20] Despite high demand from medical student applicants and the public for increased physician training opportunities, the number of residency spots has increased slowly, from 2913 in 2013 to 3079 in 2022.[21] Among Canadian medical graduates, 96% of them were successfully matched to a residency program in 2022. Furthermore, only 10% of the eligible IMGs successfully matched to a residency program each year with ~354 total residency spots dedicated to IMGs. This means that 90% of eligible IMGs can't work due to limited residency spots.[21,22] It's currently not possible to 'self-fund' or be sponsored by an organization to create extra residency spots.[23]



Path to become a family physician

2. Lack of interest in family medicine

In 2022, about 45% (~1400) of residency spots were allocated for family medicine. However, only 30% of medical students ranked family medicine as their top choice, which has steadily decreased by 38% in 2015.[24,25] There were 115 out of 3,410 residency positions that went unfilled, 99 of which were family medicine.[21] This means around 4% of medical graduates would rather forgo training to become a fully licensed physician for a year than train to become a family physician.

There are many reasons why a medical student would avoid training in family medicine. First, the average Canadian family physician makes $332,000 per year (the lowest paid medical specialty). In addition, 30% of their salary goes towards overhead cost which may not apply to other specialties.[26]

Second, lack of respect for family doctors, as 76% of medical students heard negative comments about family medicine during clinical training and 91% believed that their peers held negative attitudes about general practice.[24] Family physicians who are burned out put teaching on a lower priority and may convey a culture of burnout in family medicine.[27]

Lastly, 71 of the 99 unfilled family medicine spots were in French-speaking regions and 79 in rural areas.[28] In Canada, many students who trained in French-speaking medical schools are proficient in English; however, those who trained in English are less proficient in French making it difficult to pursue a French residency. Rural practice also presents many barriers, such as fewer spousal employment opportunities, unfamiliarity with the community/lifestyle, and decreased access to specialists.[24,32]

Low respect and income have led many medical students to classify family medicine as a 'backup career.'[24]

3. Changing practice styles

On average, a family physician sees patients in their office fewer than 3½ days a week, with almost one-third of family doctors not providing comprehensive primary care. First, compared to previous generations, there is a greater emphasis on work-life balance.[29] Second, family doctors can have various roles such as education, research and specialization in an effort to increase compensation and job satisfaction. About one-third of family physicians in Canada have a specialty focus outside of primary care such as low-risk obstetrics or emergency medicine.[30] However, working in their specialty of interest can away time providing primary care.

4. Unsupportive primary care system

Canadian health care has a greater emphasis on acute care than primary care.[31] Under the current primary care model, family physicians are compensated per patient visit but not for administrative tasks such as filling out third-party forms, sourcing medical supplies, and managing staff.[33] Canadian physicians collectively spend 18.5 million hours per year on such non-patient care related tasks.[33] Many doctors complete these tasks after-hours which 60% of physicians state as a contributor to their worsening mental health and reduced job satisfaction.[34] Another example where family physicians don't receive compensation is providing after-hours telephone care. In BC, family physicians are mandated to provide on-call phone availability; however, they are not compensated for the time being available for after-hours care.[33] With a lack of administrative support and stagnant payment models, many believe that the costs to maintain a family practice are becoming unsustainable.[35]

"Imagine if our public education system was structured where teachers needed to start their own schools, and then we paid them per student per lesson" - Dr. Rita McCracken (CBC News: The National).[36]

5. Increasing patient complexity

With aging populations, increasing rates of obesity and chronic diseases, patients are becoming more medically complex.[37-39] Consequently, these increased demands for primary care can ultimately overwhelm family physicians.[40] Furthermore, most family doctors get paid per patient visit, incentivizing them to see patients quickly. Faced with complex patients, doctors often have to choose between spending the time required to address patient's issues and seeing more patients to maintain the sustainability of their clinic.

"I don't spend less time with my patients because I don't want to [spend time with them]. I spend less time with my patients because of the funding model, because I simply can't keep the lights on if I spend the amount of time that I actually want to spend with my patients." Dr. Christopher Applewhaite.[41]

Summary of root causes

Family Physician Supply

1. Lack of funding for medical trainees
2. Lack of interest in family medicine
3. Unsupportive primary care system
4. Changing practice styles

Patient Demand

5. Increased patient complexity and health concerns

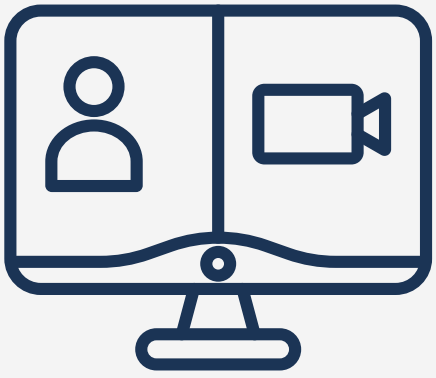
Solution Landscape

Local

Increased utilization of allied health professionals

- Thessalon, Ontario is one of several rural communities which have nurse practitioner-led clinics that provide a wide range of primary care services with an effort to alleviate pressure on family physicians.[42]
- Lethbridge, Alberta has a pharmacist-led clinic that reduces family physician workload by managing minor ailments and chronic diseases through prescribing medications and ordering lab tests.

However, the scale of implementation is lacking beyond local levels. Recently, a recommendation has been made to the Ontario government to hire 1000 staff such as nurses, pharmacists, and physician assistants to encourage interdisciplinary collaboration.[43]



Increased telemedicine usage in clinics to consult with patients, especially those in rural areas

There has been an increased adoption of virtual care to increase patient access to family doctors, especially those in rural communities. However, evidence is mixed. Some studies found these clinics increased pressure on ED visits due to lack of continuity of care while others found no correlation.[44,45]

Provincial

Trained more family physicians

- Nova Scotia recently added 10 new residency positions for family physicians

  Newfoundland added 5 family physicians

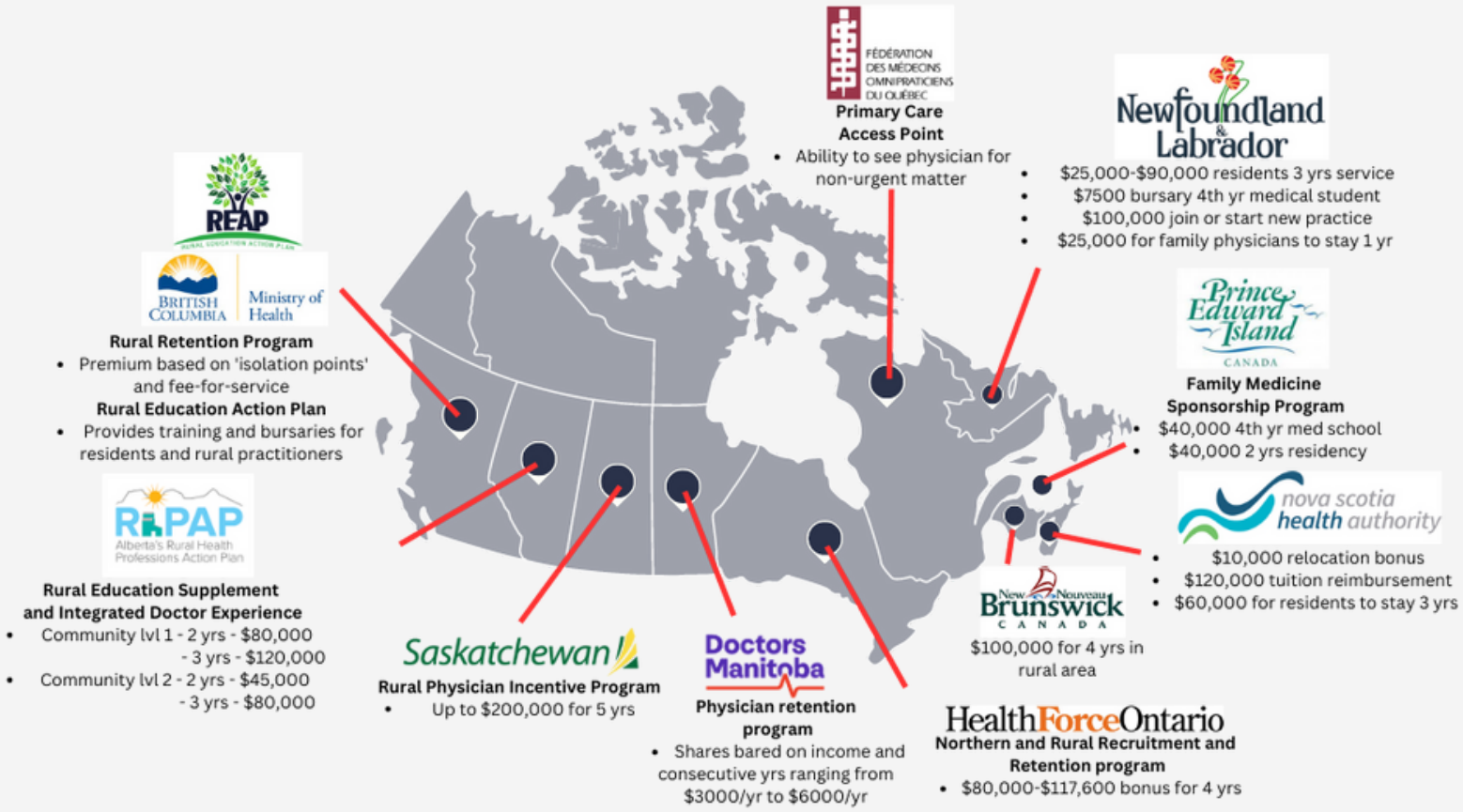
  Ontario is adding 160 medical school seats and 295 postgraduate positions over the next 5 years.
- Although these provinces increase the supply of family physicians, it's still inadequate to meet the rising demand of primary care in Canada.

Expanded scope of practice for other healthcare providers

- Ontario and BC has recently expanded the scope of practice for pharmacists to prescribe and treat minor ailments (i.e., allergic rhinitis, atopic dermatitis, etc.).[46] However, Alberta has allowed pharmacists to prescribe medication for over 10 years.[47]

Increased remuneration and incentives for family medicine physicians

- BC implemented a Longitudinal Family Physician payment model that compensates physicians for "time spent, number of patient visits, and the number and complexity of the patient under their care." Annual compensation is expected to increase from $250,000 to $385,000. While recently implemented, 160 family physicians have already moved to practice in BC.
- An example of successful national implementation is in Denmark where family doctors have higher compensation compared to hospital specialists. They are well respected among their peers and the total cost of the healthcare system is low.[48]



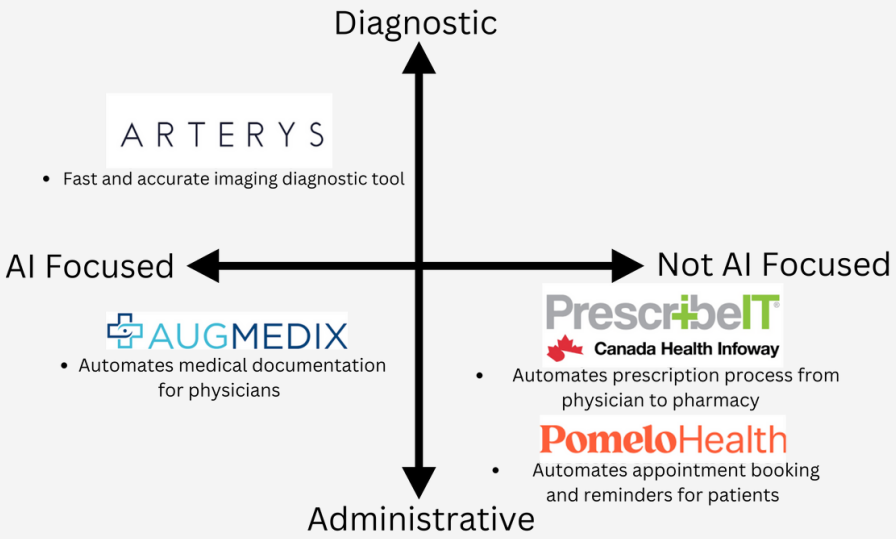
Implemented provincial programs to incentivize family medicine residents to practice in rural areas

- Alberta implemented the Rural Education Supplement and Integrated Doctor Experience while other provinces have similar programs (map above). However, the effectiveness of these programs is lacking. In Alberta, only one physician was attracted to practice rurally due to the limited eligibility criteria.[49]

National

Medical and administrative technology

- Pomelo can schedule appointments and send reminders to reduce patient no shows.
- PerscribeIT enables doctors to e-prescribe directly to a pharmacy instead of printing and faxing.
- Artificial intelligence (AI) can help detect abnormalities in medical imaging and labs, analyze patient records, and detect early signs of disease.[50]



Scheduling and prescribing software are effective at reducing administrative burden. However, prescribing software such as PerscribeIT has only been implemented in a handful of communities due to rigid regulations. AI can assist with medical decisions, but still requires further research before implementation.

Facilitated foreign-trained doctors to practice in Canada

- The National Assessment Collaboration is an organization that started “practice ready assessments." This program is a way for international physicians to obtain a Canadian license.
- The International Induction Programme is a similar program in the United Kingdom (UK) which provides indemnity and monthly bursaries up to ~$5800 CAD, alongside financial support for childcare and visa.[51]

So far, 7 provinces have adopted the 12 week practice ready assessment in Canada.[1] Although this can increase the supply of family physicians, it's still inadequate to meet the rising demand of primary care in Canada. For example, only 204 physicians were trained this way since 2015 in BC. Similar to Canada, the UK's program has only recruited 124 family physicians in 2022 with the goal of recruiting 2000.[51]

Gaps Identified

Listed below is an impact-gap canvas for the family physician shortages in Canada which highlights the root causes, existing solutions, and the gaps between them.

Residency funding limitations

Increase funding for medical trainees

Canada has the infrastructure and personnel to train more medical residents. In 2018, ~1100 international medical residents were trained in Canada but funded by their home country with the expectation they return after graduation.[14] This means the limiting step to physician training is government funding.

Recommended stakeholder action

- Provincial government: fund extra residency spots or change government regulations to allow organizations to help fund more residency spots.

Undesirable residency locations

Encourage French and rural practice

The majority of unfilled residency spots are for family medicine, largely in French-speaking rural areas and many physicians return to practice in their hometowns.

Recommended stakeholder action

- Medical schools
  - Enroll more medical students from rural or French-speaking areas or those with an interest to practice in those areas.
  - Provide more opportunities to experience the benefits of family practice such as scope of practice and longitudinal relationships in rural areas.
- Local health authorities: partner with rural communities to address lifestyle concerns (i.e., amenities, social opportunity).

Stagnant payment models

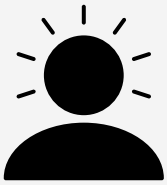
Change physician compensation

Increased compensation, particularly in BC, has been successful in attracting family physicians.

Recommended stakeholder action

- Provincial governments
  - Compensate family doctors for administrative tasks, coordinating care and providing after-hours care.
  - Have compensation models blend capitation and fee for service so family physicians are paid to be responsible for a patient's continuity of care with incentives to see many patients efficiently.

Levers of Change



Limited awareness of non-physician healthcare professionals' scope of practice

Promote interdisciplinary care

With the demand for family physicians, utilization of other healthcare professionals such as pharmacists and nurse practitioners is imperative. However, some patients may be hesitant to trust non-physicians.

Recommended stakeholder action

- Media: educate patients on the benefits of receiving medical advice from allied health professionals.
- Provincial and local government: encourage more family doctors to work in collaborative healthcare networks such as Alberta's Primary Care Networks.

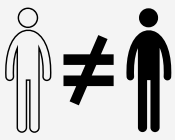
Ineffective and lack of use of technology

Support development and implementation of technology

Utilization of technology such as AI can assist healthcare professionals but implementation is slow and difficult due to tight regulations.

Recommended stakeholder action

- Regulatory bodies of healthcare professions: validate the efficacy of technology early in their development cycle and be flexible with regulations when piloting technologies.



Health inequities & social determinants of health

Address inequities and social determinants of health

Overtime, this can reduce the demand for family physicians. Examples include improving access for marginalized populations, addressing socioeconomic factors and encouraging healthy habits to increase the baseline health of patients.

Recommended stakeholder action

- Federal government: provide affordable housing & evaluate policies and programs through a health equity lens.

Reflections and Insights

Addressing shortages of family physicians in Canada is a complex health-system issue that can be conceptualized as an imbalance between supply and demand. Insufficient funding, burnout, limited residency positions, and a lower emphasis on primary care limit supply of family physicians. Additionally, aging populations and reduced focus on preventative medicine result in increased demand.

As we progress from the height of the COVID pandemic, there emerges greater reliance on telemedicine, utilization and expanded scope of healthcare providers, and greater awareness of public health. It is hopeful that with proper implementation and further research, the supply of family physicians will increase, while demand from patients will decrease. When this balance is achieved, it's likely to have a ripple effect, improving physician burnout, decreasing ED visits, and improving the health of patients.

The shortage of family physicians in Canada is an urgent need that affects everyone. However, not everyone is affected in the same way and it's important to acknowledge and address the issues of health inequity and social determinants of health to ensure equitable access and high quality healthcare.

Limitations

Family physician shortages, while largely prevalent in Canada, also exist in many other countries. This report consists mostly of Canadian sources and is most reflective of the issues and solutions within Canada. Furthermore, depictions of the problem and solutions presented in this report are a generalization of the Canadian population and some modification may be required to address the needs of each unique population.