

Exploring the factors that influence the ratio of generalists to other specialists in Canada

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Abstract

Objective To explore perceptions about the factors that influence the ratio of generalists to other specialists.

Design Semistructured interviews.

Setting Canada.

Participants Thirteen individuals who were closely involved in medical education and health human resource planning or had a role in influencing medical education policy.

Methods Telephone interviews were conducted with participants until data saturation was reached. Interviews were transcribed and analyzed using constant comparison techniques. For the purpose of simplifying discourse, *family medicine* and *generalism* were treated as synonymous throughout the interviews.

Main findings Seven themes emerged from participants' responses: ratio of generalists to specialists, importance of generalism, barriers to generalism, role of the medical education system, role of policy makers, geographic location, and the future of generalism.

Conclusion Most respondents perceived the ratio of specialists to generalists as roughly even and believed the reasons for this balance included increased attention from policy makers, a greater presence of family physicians in research and teaching, and a shift toward a more regional and representative distribution of medical education facilities. Respondents also highlighted challenges within family medicine including providers choosing a narrower scope of practice, a shift away from generalism, and ongoing inequities between family physicians and other specialties in terms of remuneration, lifestyle, and prestige.

EDITOR'S KEY POINTS

- While trends in the number of doctors practising family medicine versus other specialties have been reported, little has been written examining the factors that shape these trends. The goal of this study was to explore the factors that influence the number of generalists and other specialists in Canada.
- Most respondents described the ratio of generalists to specialists as roughly 50:50. They credited the medical education system and government policy as key drivers influencing this ratio. Respondents identified lower rates of pay, the perception of generalism as an inferior discipline, and a lack of exposure to generalist practice in medical school as barriers to pursuing generalist medicine; a renewed emphasis from governments on family medicine and the transition to team-based care were viewed as facilitators.
- Although respondents highlighted the challenges within family medicine (eg, changing practice models), the consensus among respondents was that steps were being taken to improve the generalist model of practice.

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Examiner les facteurs qui influencent le rapport entre généralistes et autres spécialistes au Canada

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Résumé

Objectif Examiner ce que l'on pense des facteurs qui influencent le rapport entre généralistes et autres spécialistes.

Type d'étude Entrevues semi-structurées.

Contexte Le Canada.

Participants Treize personnes qui participaient activement à la formation médicale et à la planification des ressources humaines en santé ou qui étaient susceptibles d'influencer les politiques concernant la formation des médecins.

Méthodes On a fait des entrevues téléphoniques avec les participants jusqu'à atteindre une saturation des données. Les entrevues ont été transcrites et analysées à l'aide de techniques de comparaison constante. Afin de simplifier le texte, les termes médecine familiale et médecine générale ont été utilisées comme des synonymes durant les entrevues.

POINTS DE REPÈRE DU RÉDACTEUR

- Même si les tendances observées dans le rapport entre médecins de famille et autres spécialistes ont déjà fait l'objet de rapports, on a très peu écrit sur les facteurs qui influencent ce phénomène. Cette étude avait pour but de passer en revue les facteurs qui influencent le nombre de généralistes et celui des autres spécialistes au Canada.
- La plupart des répondants ont évalué le rapport entre généralistes et spécialistes à environ 50 : 50. Selon eux, le système d'éducation en médecine et les politiques gouvernementales étaient les principaux responsables de cet état de fait. Une rémunération moindre, la perception que la médecine générale est une discipline inférieure et le manque d'exposition à la pratique généraliste à la faculté leur paraissaient être des obstacles au choix d'une pratique en tant que généraliste; par contre, une revalorisation de la médecine familiale de la part du gouvernement et l'adoption d'un mode de soins basé sur des équipes étaient considérés comme des facteurs facilitateurs.
- Même si les répondants ont souligné les défis auxquels fait face la médecine familiale (p. ex. les nouveaux modèles de pratique), ils étaient généralement d'accord pour souhaiter qu'on prenne des mesures pour améliorer le modèle de pratique des généralistes.

Principales observations Sept thèmes sont ressortis des réponses des participants : le rapport entre généralistes et spécialistes; l'importance de la médecine générale, les obstacles à ce type de pratique, le rôle du système d'éducation médicale et celui des responsables des politiques, la localisation géographique et l'avenir de la médecine générale.

Conclusion La plupart des répondants estimaient que le nombre de spécialistes et de généralistes est à peu près égal et que les raisons de cet équilibre incluaient une attention accrue de la part des responsables des politiques, une présence accrue des médecins de famille dans la recherche et l'enseignement, et des changements favorisant une distribution régionale plus représentative des occasions de formation médicale. Les répondants ont aussi souligné les défis qui confrontent la médecine familiale, les médecins qui choisissent un spectre moins large de pratique, le déclin de la médecine générale et les inégalités qui perdurent entre médecins de famille et spécialistes en termes de rémunération, de mode de vie et de prestige.

Cet article a fait l'objet d'une révision par des pairs.
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In recent years, medical practitioners in Canada and throughout the world have shown a strong tendency toward specialization.¹⁻² Consequently, in many countries, specialists are more valued than GPs are.^{3,4} This trend has extended into the medical education system, which is often influenced by the *hidden curriculum*, defined as “a set of influences that function at the level of organizational structure and culture.”⁵ This informal but powerful imbalance often devalues the work of family doctors who typically practise under a more generalist model than other specialty groups do.³ Consequently, care for specific conditions improved while primary care grew, in some cases, less accessible and comprehensive. This shift might also have led to increases in the overall cost of health care, as family doctors are typically remunerated at a substantially lower rate than other specialists are and rely less on costly technologies in their practices. Canada spent \$214.9 billion on health expenditures in 2014, representing 11% of the country’s total gross domestic product. In 2009, the Association of Faculties of Medicine of Canada released a report calling for a series of changes to the medical education system in Canada and an increased effort to address the biases toward specialization promoted by the hidden curriculum.³

By establishing a strong doctor-patient relationship, family physicians are able to provide more comprehensive and continuous care, allowing them to better manage chronic conditions and promote healthy lifestyles within their patient populations. Countries with strong primary care systems have lower rates of premature deaths, deaths from treatable conditions, and neonatal and postnatal mortality.⁶⁻⁸ By managing and triaging undifferentiated patients, family doctors help patients navigate the health care system, allowing resources to be more efficiently used. Many cases can be thus handled without referral to other specialists, whose care is often expensive. Also, countries with a strong focus on primary health care provide better medical coverage to their rural and hard-to-serve communities.⁹

Many of the health care systems operating within Canada have already taken steps to improve the quality and accessibility of primary health care, one example being Ontario’s development of more comprehensive primary health care delivery models such as community health centres and family health teams.⁷ The number of medical students going into primary medicine has increased from 38% in 2003 to 43% today.¹⁰ According to the Canadian Institute of Health Information, of the 75 142 physicians currently practising in Canada, 38 259 (50.9%) do so as family physicians.¹¹

While trends in the number of doctors practising family medicine versus other specialties have been reported, little has been written examining the historic and current

factors that shape these trends. The purpose of this study was to explore the reasons for the number of generalists versus other specialists as identified by respondents in the study.

METHODS

Design

We conducted a thematic analysis using constant comparison techniques to elicit themes from a series of semi-structured interviews conducted with experts in medical education and health human resources.

Population

Interviews were done over the telephone between January 1, 2014, and July 31, 2014, with key informants who are closely involved in medical education and health human resources, or who play a role in influencing medical education policy. A telephone interview strategy was chosen to allow interviewers to reach participants across Canada. Initial participants were selected through previous connection with one of the authors (N.B.). A research assistant with no previous knowledge of the participants (J.J.) conducted the interviews, and all transcripts were de-identified to ensure anonymity. Subsequent participants were identified through snowball sampling, wherein participants identified individuals eligible to participate in the study. The recruitment process continued until data saturation was reached.

Data collection

The interviewer used an interview guide (**Table 1**) to gather information on the current and historical trends between general practice and specialization, the factors responsible for Canada’s current distribution of family physicians and other specialists, and the effects that the medical education system and other factors have on the makeup of the physician population.

For the purpose of simplifying discourse, *family medicine* and *generalism* were treated as synonymous throughout the interviews. Although family medicine has historically adopted a generalist approach to providing care (ie, addressing a range of problems from a diverse patient panel), it is classified as a specialty in Canada. Other more general disciplines (eg, general internal medicine, general pediatrics, and general surgery) were not included in our definition of *generalism*.

Analysis

The research team conducted a thematic analysis using a constant comparison approach. The 2 team members (N.B. and J.J.) met to conduct a preliminary exploratory analysis of the first 3 interviews. Both parties coded the transcripts separately then reconvened to share

Table 1. Semistructured interview guide

NUMBER	QUESTION
1	Describe the current ratio between the number of <i>generalists</i> (defined for the purpose of this study exclusively as family physicians) and other specialists practising in Canada
2	Have you observed any historical trends relating to the distribution of generalists and other specialists in Canada? If so, what are they?
3	What factors do you believe currently contribute to the number of generalists and other specialists operating in Canada (eg, financial, prestige)?
4	Do you believe that the medical education system plays an important role in determining the number of generalists and other specialists in Canada? If so, what is that role?
5	Based on your observations and knowledge of Canada's health care system, what changes, if any, do you expect to see in the ratio of generalists to other specialists over the next decade?

their findings and establish potential themes. Once data saturation had been reached, they reviewed all interviews to refine themes and identify any disconfirming data.

RESULTS

A total of 13 participants took part in semistructured interviews. Participants were primarily male (85%) and lived in 3 provinces across Canada. Their positions included current or past participation in medical education, faculties of medicine, governments, national colleges, and other associations.

Seven themes were developed from participants' responses: ratio of generalists to specialists, importance of generalism, barriers to generalism, role of the medical education system, role of policy makers, geographic location, and the future of generalism. **Table 2** presents examples of respondents' quotes that represent each theme.

Ratio of generalists to specialists. Most respondents agreed that the current ratio of generalists to other specialists in Canada is fairly even, with roughly 50% of doctors practising family medicine and 50% practising a different specialty. Respondents found this ratio to be stable and beneficial, with several noting it had remained constant throughout their careers. Proposed causes for the ratio were more varied. Some respondents cited the medical education system or governmental policy, but many described the ratio as an "unwritten rule," less a conscious design than an inherent settling point for Canadian practitioners (Quotation 1).

Table 2. Key quotations from respondents

NUMBER	QUOTATION
1	Over the years people have said, "What is the right number?" "Who started it?" and "What is the rationale [for the 50:50 ratio]?" Anytime I have seen people search for [an answer] they haven't come up with much. But having said that, I do think that it has served our population well
2	What Canadians should be able to expect of their family physician is ... a qualified caring professional who can see all men and women of any age for all presenting problems
3	I would say that [the perception has] for the most part remained that the "smart people" go into the subspecialty, the prestige is associated with the subspecialty, that the real people who care about research go into the subspecialties. The best teachers are going to be the subspecialty teachers, the generalists are going to teach around the real soft stuff. They are not going to be valued academics, they are not going to be given important titles
4	[The trend] in Canada and in many other places is for specialists not only to become a surgeon but they have to have a little specialized attachment. So you ... become an internist with an extra qualification in respirology or cardiac medicine, or if you are a pediatrician you become a pediatric endocrinologist
5	From the time a student begins medical school, if they are studying and working in a context that does not expose them to all medical disciplines in a very fair and equal way ... then their own impression is skewed
6	Many of [the challenges facing generalism] have started to be addressed over time. [These challenges] certainly hit the higher priority level for those who together have to address these; that includes governments, medical schools, medical associations, and the other health care associations, and that has started to turn things back around in the last few years. Each year more and more students are selecting family medicine again and we are now up to 35% selecting it as a first choice. [They fill] 40% of the first-year postgraduate positions
7	In Canada we are definitely moving in the direction of team-based care ... where one physician may provide a few of the focus practice areas of care and meet needs in that area, and their colleagues will meet others and they hopefully all can provide the broad scope of care that each patient and each family needs

Importance of generalism. Many respondents stressed the importance of generalism to the health care system. These respondents argued that generalist family physicians provide patients with an important touchstone in the health care system, acting as a trusted and safe source of information and a gateway to additional care when needed (Quotation 2).

Several respondents perceived general practice to be a responsibility that more physicians need to take on, particularly in the wake of a population that is aging and facing higher levels of chronic disease.

Barriers to generalism. Respondents listed a number of barriers that doctors face in choosing to become generalists. These barriers fell into 2 main categories: social perceptions and changing practice models.

Social perceptions: Nearly all providers agreed that, over the past few decades, an informal hierarchy has formed between provider types, with specialists on top and generalists underneath. In this hierarchy, generalism is viewed as a less prestigious alternative to specialization and generalists are perceived as lower-tier physicians who have less ambition and lower career trajectories (Quotation 3).

Respondents stated that these perceptions affect more than just prestige. Remuneration is also a factor in which specialists come out on top. Most respondents noted that generalists make less money on average than specialists do and they believed that this was not likely to change. As one respondent argued: “Why would anybody sitting in Moosonee [earn] \$200 000 and work himself to death if he can be a specialist in a big city [and] make double that?”

In addition to higher pay, respondents cited more accommodating hours as an advantage to specialist practice: “Specialists will always have better hours than GPs, especially rural GPs.” Several respondents believed that new graduates were particularly drawn to these benefits, noting a “generational change in terms of sense of priorities and choice of work style and lifestyle.”

Other respondents agreed, describing an increasing trend toward fields of practice that offer more set hours and a better work-life balance. As a result, specialty groups that provide this stability have flourished, while fields of practice with more erratic hours have become less common: “There are people going into medicine with the idea of being a specialist with an easy life with a defined area of expertise.”

Changing practice models: Respondents unanimously described a shift in practice behaviour wherein providers are choosing narrower scopes of practice. One respondent noted the proliferation of subspecialties in recent years, and several others agreed that new practitioners exhibit a greater tendency to focus on a very specific demographic population or type of medicine (Quotation 4). Furthermore, several respondents noted that the trend to subspecialization has occurred within family medicine as well, with an increasing number of family physicians focusing on a specific subset of patients or conditions.

Some respondents mentioned the psychological benefit of subspecialization, as physicians with narrow

scopes of practice were less likely to encounter unexpected problems. As one respondent explained: “I think it is human nature to drop things you are not interested or comfortable in.”

However, respondents noted that subspecialization “has made it more difficult for patients to be able to access generalist specialist[s] in various areas, whether it is in pediatrics, psychiatry, surgery, etc.” It can limit providers’ job prospects outside of large urban centres where the large population can support subspecialized practitioners. This leads to a great deal of competition in the country’s urban centres, while the less populated regions remain relatively underserved.

Role of the medical education system. Respondents agreed that the medical education system plays a considerable role in determining the generalist-to-specialist ratio in Canada. Its influence is exhibited in different ways. For instance, as medical schools have a large degree of control over the “flow” of new graduates into the job market, they can exert a great deal of influence over the generalist-to-specialist ratio by adjusting the number of positions they make available for each group.

However, most respondents believed that the culture cultivated by the medical education system had the greatest effect on attitudes toward and perception of generalist practice. The attitudes of educators and administrators toward more generalist practice can influence students’ likelihood of pursuing careers in those fields. Many respondents noted that medical schools offered disproportionate exposure to highly specialized physicians, while family medicine and more generalist disciplines were comparatively ignored (Quotation 5).

Adding to this imbalance is, according to several respondents, an attitude of implicit superiority in which specialization is placed above generalism. This bias, while not explicitly taught, can nevertheless affect how medical students perceive family medicine. As one respondent stated, “Medical students get this attitude from day one: if you are not a specialist you are nothing.” While this perception remains an issue, several respondents noted that family medicine has gained a greater foothold in teaching in recent years as primary care doctors have begun to take on greater roles in research and teaching.

Role of policy makers. Government policy also played a role in determining the generalist-to-specialist ratio under its jurisdiction. Several respondents credited provincial policies with the resurgence of medical students choosing family medicine. Government policies affect physician behaviour in a number of ways, the most obvious of which is remuneration. While those in other specialties remain higher paid than those in family

medicine are, several respondents noted an encouraging trend: “There have been changes made to try to find ways to make the potential remuneration and incomes more equitable amongst all of the different specialties and family medicine.”

While governments are the ones that ultimately enact policy, other organizations can serve as levers to promote change. Some respondents identified the Royal College of Physicians and Surgeons of Canada as a driver of subspecialization in medicine through its proliferation of subspecialty classifications. Likewise, several respondents credited the College of Family Physicians of Canada (CFPC) with improving the uptake of family medicine in recent years through advocacy for the discipline.

Geographic location. When discussing the ratio of generalists to specialists, many respondents raised the unique issues facing the country’s rural regions. Several respondents stated that rural physicians are more likely to be generalists, whereas a greater percentage of urban physicians are in specialized practices. This schism likely comes from the demands of the rural population, who still experience a range of problems but lack the population to support a number of specialized practices. Rural physicians must therefore adopt a broader role to adequately serve their patient panel. As one respondent noted: “When compared to their metropolitan counterparts, rural practitioners provide a wider range of services and a higher level of clinical responsibility in relative professional isolation.”

Despite rural physicians adopting generalist roles, rural regions often struggle to recruit enough doctors to cover their populations. A number of respondents noted that “rural doctors have larger patient populations and rural people are probably not getting the same sort of attention that people in cities would.”

When asked about the cause of this supply issue, many respondents pointed to the location of medical schools. Traditionally, medical schools have been located in large urban centres. Students gain clinical experience in urban practices and become more accustomed to the needs and climate of these areas, and are more likely to practise in urban areas themselves. Consequently, few physicians move to rural areas, leading to a dearth in coverage. However, a few respondents noted that the Canadian medical education system has begun redistributing its educational centres to provide coverage more in line with the country’s population distribution. As such, they believed “the old central training idea is probably becoming a thing of the past.”

The future of generalism. Despite the recent trend of subspecialization and the ongoing perception of family medicine as inferior, many respondents were optimistic about the future of generalism in medicine and the return

of the traditional role of the family doctor. Respondents disagreed about how much progress has been made, but most of them thought things were moving in a direction more hospitable to the generalist model of practice. Respondents cited a resurgence of interest in primary care among graduates and a greater focus on generalist disciplines by medical schools (Quotation 6).

The main driver of this change, many respondents believed, is the shift toward a team-based model of primary care. As one respondent described it, team-based care involved practices where “patients have an individual family doctor who is part of a multidisciplinary team that is well provided and supported to provide the majority of their care within that unit.” The model is supported by provincial health care systems and the CFPC (Quotation 7).

Likewise, health care systems across Canada have begun offering broader roles for allied health care providers such as nurse practitioners. These professionals allow practices to offer a larger basket of services to their patients, giving clinics a more generalist approach dispersed through multiple providers.

Respondents generally viewed this shift as a positive change for health care, leading to better primary care coverage for patients and better access to a range of health care services. As one respondent stated: “I hope to see by the end of the next decade that almost the entire population of Canada will have their primary care provided by a coordinated family health team.”

A few respondents expressed concerns over the future of family medicine, noting that some regions might struggle to fill positions caused by the coming wave of retirements among “baby boom” doctors: “There were a few years that we were hearing about physicians who intended to retire that absolutely couldn’t because there was no one to replace them.”

While challenges were noted, the consensus among respondents was that steps were being taken to improve the standing of generalism in Canada.

DISCUSSION

Most respondents described Canada’s ratio of specialists to generalists as roughly 50:50. They credited the medical education system and provincial policy as key drivers influencing this ratio. Respondents cited lower rates of pay, the perception of generalism as an inferior discipline, and a lack of exposure to generalist practice in medical school as barriers to young physicians pursuing generalist medicine, while a renewed emphasis from governments on family medicine and the transition to team-based care were seen as facilitators. Many respondents also stated that geographic location affected physicians’ likelihood of practising generalist

medicine, with generalization predominating in more rural areas.

A number of policy decisions over the previous decades have helped support family medicine in Canada. Before the early 1990s, medical students could do a rotating internship in their first year before going out to practise on their own.¹² The rotating internship allowed students to explore various medical disciplines before choosing a specialty¹³; however, concerns with the model led to its gradual abolishment across Canada.¹⁴⁻¹⁶ As a result, students had to choose family medicine or another entry-level discipline right out of medical school. In the short run this led to a drop in interest in family medicine; however, over the long term it has served family medicine well.¹⁷ Furthermore, when discussing the evolution of family medicine in Canada, it is important to note the role of the CFPC, founded in 1954 to promote family medicine. In the 1990s, when interest in family medicine as a career was waning,¹⁸ the CFPC stepped up and vigorously promoted the discipline in all venues, and began critical initiatives such as family medicine interest groups on all medical school campuses.

Despite the recent structures put in place to support family medicine, the “hidden curriculum” remains a barrier to medical students seeking careers in primary care.^{19,20} A number of initiatives have been implemented to address these concerns, including the Future of Medical Education in Canada medical doctor and postgraduate projects,²¹ competency-based medical education,²² and the development of new models of compensation for primary care doctors.²³ These factors have helped encourage enrolment in family medicine by making it a more attractive option for students while simultaneously ensuring that practitioners have the skills and competencies necessary to provide quality care.

Limitations

Our study has some limitations. Although we made efforts to maximize the variance of our study population, our use of snowball sampling limited our study’s generalizability. Notably, our sample primarily contained participants with experience in primary care or generalist medicine. Likewise, our study population ultimately included participants from only 3 provinces. Generalizability to other provinces is thus limited. Future work exploring the views of experts in other specialist groups on the ratio of generalists and specialists would provide an interesting counterpoint to our current study.

Conclusion

Most respondents perceived the ratio of specialists to generalists as even and believed the reasons for this balance included increased attention from policy makers, a greater presence of family physicians in research and teaching, and a shift toward a more regional and

representative distribution of medical education facilities. Respondents also highlighted challenges within family medicine including providers choosing a narrower scope of practice, a shift away from generalism, and ongoing inequities between family physicians and other specialties in terms of remuneration, lifestyle, and prestige. 🌿

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Contributors

Mr Joschko created the data collection and analysis strategy and conducted the interviews. **Dr Busing** conceived of the study and provided oversight of the data collection process. Both authors contributed to data analysis and manuscript writing, and approved of the final draft of the manuscript.

Competing interests

None declared

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