

## Why would I choose a career in family medicine?

### Reflections of medical students at 3 universities

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#### ABSTRACT

**OBJECTIVE** To describe the factors that medical students report influence them to pursue careers in family medicine.

**DESIGN** Qualitative study using focus groups and interviews and the results of surveys conducted at 3 different points in medical education.

**SETTING** Three medical schools in western Canada: the University of British Columbia in Vancouver, the University of Calgary in Alberta, and the University of Alberta in Edmonton.

**PARTICIPANTS** A total of 33 medical students.

**METHOD** Students were surveyed during the first 2 weeks of their programs, at the end of their preclinical training, and again at the end of their clinical training on their interest in family medicine or other specialty areas. Focus groups and interviews were conducted to explore the reasons students gave for an emerging or final interest in family medicine as a career choice. A small cohort of students who stayed with another specialty choice or switched to another specialty from family medicine were also interviewed. Thematic content analysis was carried out.

**MAIN FINDINGS** Students identified several important influences that were subdivided into pre-medical school, medical school, postgraduate training, and life-in-medicine influences. Many positive and negative aspects of family medicine were reported during the preclinical period. Clinical exposure was critical for demonstrating the positive aspects of family medicine. Postgraduate training, future practice, and nonpractice life considerations also influenced students' career choices.

**CONCLUSION** This study provides a qualitative understanding of why students choose careers in family medicine. Medical schools should offer high-quality family medicine clinical experiences, consider the potentially positive influence of rural settings, and provide early and accurate information on family medicine training and career opportunities. These interventions might help students make more informed career decisions and increase the likelihood that they will consider careers in family medicine.

#### EDITOR'S KEY POINTS

- In Canada the proportion of students selecting family medicine as their first choice in the Canadian Resident Matching Service match fell from 44% in the early 1990s to 25% in 2003, the lowest percentage ever.
- In this study, qualitative methods were used in an effort to develop a phenomenologic understanding of why students choose careers in family medicine during medical school.
- Several new areas that have not previously been identified as important influences on career choice were highlighted. Family physicians themselves discourage students from going into family medicine. The length, intensity, and culture of residency training are also important factors.

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Full text is available in English at [www.cfp.ca](http://www.cfp.ca).

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## Pourquoi choisirais-je une carrière en médecine familiale?

Réflexions d'étudiants en médecine de 3 universités

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### RÉSUMÉ

**OBJECTIF** Décrire les facteurs qui, selon des étudiants en médecine, influencent leur décision de choisir la médecine familiale.

**TYPE D'ÉTUDE** Étude qualitative à l'aide de groupes de discussion et d'entrevues, et enquêtes à 3 étapes différentes de la formation médicale.

**CONTEXTE** Trois facultés de médecine de l'Ouest du Canada: les universités de Colombie-Britannique à Vancouver, de Calgary en Alberta et d'Alberta à Edmonton.

**PARTICIPANTS** Un total de 33 étudiants en médecine.

**MÉTHODE** Des enquêtes ont été effectuées auprès des étudiants durant les 2 premières semaines du programme, à la fin de la formation préclinique et à nouveau à la fin de la formation clinique afin de déterminer leur intérêt pour la médecine familiale ou pour une autre spécialité. Des groupes de discussion et des entrevues ont permis d'explorer les motivations exprimées par les étudiants quant à leur intérêt, nouveau ou définitif, à l'égard d'une carrière en médecine familiale. On a aussi interviewé un petit groupe d'étudiants qui avaient maintenu leur choix pour une autre spécialité ou qui avaient abandonné la médecine familiale pour choisir une autre spécialité.

**PRINCIPALES OBSERVATIONS** Les étudiants ont identifié plusieurs facteurs relatifs aux études pré médicales, médicales et de troisième cycle, et aux conditions de vie des médecins. Durant la période préclinique, ils rapportaient plusieurs aspects positifs et négatifs de la médecine familiale; l'exposition à la clinique constituait un moment critique pour en révéler les aspects positifs. La formation de troisième cycle, la pratique future et les considérations relatives aux conditions de vie en dehors de la pratique avaient aussi une influence sur le choix de carrière.

**CONCLUSION** Cette étude de nature qualitative permet de mieux comprendre les raisons pour lesquelles les étudiants choisissent une carrière en médecine familiale. Les facultés de médecine devraient offrir des stages cliniques de médecine familiale de qualité élevée, tenir compte de l'influence potentiellement positive des contextes ruraux et fournir précocement des informations exactes sur la formation en médecine familiale et les possibilités de carrière. De telles interventions pourraient aider les étudiants à prendre des décisions de carrière plus éclairées tout en augmentant la probabilité qu'ils envisagent des carrières en médecine familiale.

### POINTS DE REPÈRE DU RÉDACTEUR

- Au Canada, la proportion des étudiants qui optent pour la médecine familiale comme premier choix dans le Service canadien de jumelage des résidents a chuté, passant de 44% au début des années 1990 à 25% en 2003, le plus bas niveau jamais atteint.
- Dans cette étude, on s'est servi de méthodes qualitatives dans l'espoir de mieux cerner les raisons pour lesquelles les étudiants choisissent de faire carrière en médecine familiale durant leur formation médicale.
- L'étude a fait ressortir plusieurs influences qui auparavant n'avaient pas été identifiées comme importantes dans le choix de carrière. Certains médecins de famille découragent les étudiants d'aller en médecine familiale. La durée, l'intensité et la culture de la résidence sont aussi des facteurs importants.

Cet article a fait l'objet d'une révision par des pairs.  
 Le texte intégral est accessible en anglais à [www.cfp.ca](http://www.cfp.ca).  
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In North America, the number of medical students choosing family medicine as a career option has fallen during the past decade. In Canada, the proportion of students selecting family medicine as their first choice under the Canadian Resident Matching Service (CaRMS) has fallen from 44% in the early 1990s to 25% in 2003, the lowest percentage ever.<sup>1</sup> In the United States, a similar pattern has developed; more than 70% of family practice residency positions were filled by US senior students in the mid 1990s, a figure that fell to 40.5% in 2005, again the lowest percentage ever.<sup>2</sup> Recently, interest in family medicine has increased in both countries,<sup>1,2</sup> with a 4% and a 1.5% increase in Canada and the United States respectively from these nadirs of interest in 2003 and 2005 compared with the 2007 match.

Both pre-medical school and medical school factors have been reported to be associated with students selecting careers in the generalist disciplines. Pre-medical school factors include demographic factors and students' stated career preferences on entry to medical school.<sup>3-11</sup> Medical school factors include the amount of time devoted to family medicine in the curriculum and the effect of role models.<sup>9,11-23</sup> Most of the literature indicates that interest in careers in primary care diminishes over the course of medical school.<sup>4,24,25</sup>

Qualitative studies, though few in number, have shown that early, meaningful exposure to family physicians, interactions with patients, scope of practice, role models (positive and negative), a holistic approach, continuity of care, lifestyle, personal fit, and organization of care are important to students considering careers in family medicine.<sup>9,26-30</sup> A limitation of these studies is that they have relied on retrospective recall of initial career choice.

In this study, qualitative methods were chosen in an effort to develop a phenomenologic understanding of why students choose careers in family medicine. Unlike other qualitative studies in this area, this study was conducted along with a parallel quantitative study<sup>31</sup> so that students did not have to rely on their recall of previous career interests. Focus group and interview participants examined their reasons for staying with or changing their initial career choices at 2 different points in their medical education. Data on their initial career choices had been collected at the time of medical school entry. This process eliminated the recall bias seen in other studies of this kind.

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## METHOD

### Sample and setting

Three medical schools in western Canada participated in this study. All students at the University of British Columbia (UBC), the University of Calgary (UofC), and the University of Alberta (UofA) participating in this study were identified from a prospective cohort of students who indicated their top career choices at medical school entry, at the end of their preclinical training, and again after making their residency choices (at the end of clinical training).

From these data, 4 groups of medical students were identified, and students from these groups were invited to participate in focus groups or individual interviews at the end of their preclinical or clinical training: students who had maintained their interest in family medicine as a career choice during the preclinical or clinical years, students who had switched their interest from another specialty at medical school entry to family medicine at the end of their preclinical or clinical years, students who had maintained their interest in another specialty during the preclinical or clinical years, and students who had switched their interest from family medicine at medical school entry to another specialty at the end of the preclinical or clinical years. For all 4 groups, initial career choice at medical school entry was considered the reference point.

Purposeful sampling for this study focused on students interested in family medicine (who had either stayed with an initial career interest in family medicine or had switched to family medicine). Three students who had either switched to another specialty or had stayed with their other specialty career choices were included in the study to increase the trustworthiness of the findings.

The UofA's medical school program is 4 years long. The first 2 years are system-based, integrating the basic and clinical sciences with training in communication skills and clinical skills. Instruction methods include lecture and small-group work with some problem-based learning. Four half-day shadowing experiences in family medicine occur in year 1. An elective shadowing weekend experience in rural family medicine is available to all students in years 1 and 2. Exposure to family medicine teachers in the preclinical years is largely through small-group facilitators. The clinical years' curriculums include a 4-week rural family medicine rotation in year 3 and a 3-week urban family medicine rotation in year 4. Students from the UofA were interviewed at the end of their clinical training.

The UofC's medical school has a 3-year program. The first 2 years are system-based, and there is a parallel medical skills program. Students are not exposed to many family physicians in the system-based courses.

In the medical skills program, however, family physicians provide most of the instruction in the communication and physical examination components. There is no mandatory family medicine experience during the first 2 years of the program. Students from the UofC were interviewed at the end of their preclinical training.

The UBC has a 4-year program. Instruction in the first 2 years is based on a problem-based learning model. A few problem-based learning tutors are family physicians. Students also attend a family physician's office for 1 afternoon a week during the first 2 years of the program. The 4-week family medicine clerkship occurs in primarily rural practices around the province at the beginning of the clinical clerkship. Two groups of students from this school were interviewed: 1 at the end of preclinical training and the other at the end of clinical training.

### Data collection

Focus groups lasting 60 to 90 minutes and individual interviews lasting 30 to 60 minutes were carried out at all 3 schools. Focus groups and individual interviews were conducted at 2 points: at the end of the preclinical years (UBC and UofC) and at the end of the clinical years (UBC and UofA). Focus groups of students at the end of their preclinical years were facilitated by P.B.M., and focus groups of students at the end of their clinical years were facilitated by L.M. Neither facilitator was associated with any aspect of the medical curriculums at any of the schools.

Focus group and interview questions covered 2 broad areas related to career choice (Table 1). Students were asked what influenced them to choose their area of career interest at the beginning of medical school and what experiences over the course of their undergraduate medical education influenced them to maintain or switch their initial career choices. Transcripts were closely reviewed by the interviewers to ensure accuracy of transcription.

**Table 1. Interview probes**

What influenced you to choose the area you were interested in pursuing at the beginning of medical school?

What experiences over the course of your undergraduate medical education influenced you to switch to, or maintain your commitment to, family medicine as a career choice?

What do you think medical schools can do to help students make decisions about their careers in medicine?

### Data analysis

Two different investigators read each set of transcripts independently. An open coding method of analysis was used in which words, phrases, or concepts in the transcript that appeared interesting were highlighted.<sup>32</sup> Descriptive commentary noting emerging themes or potential patterns in the data were noted. These coding segments were examined to identify preliminary thematic categories. The thematic categories were compared and discussed over the course of several meetings with all investigators coding a number of transcripts that were then compared. Final thematic analysis was done by one investigator (I.S.). Disagreements in coding were resolved by consensus.

The trustworthiness of results was ensured in several ways, including triangulation (comparing findings with a parallel quantitative study<sup>31</sup>), using both focus groups and interviews, and collecting data at 3 different schools with different curriculums. Trustworthiness was further ensured by member checking (a draft of the results was distributed to a subset of focus group and interview participants at each school, and comments were solicited). The trustworthiness of the coding scheme was ensured by presenting a draft of the results to medical students and residents who had not participated in the focus groups or interviews and soliciting their comments.

The study was approved by the research ethics boards of UBC, UofA, and UofC.

## FINDINGS

Twenty-four students participated in 6 focus groups, and 9 students participated in individual interviews. All but 3 of these students had maintained an initial career interest in family medicine or had switched from another specialty to family medicine during medical school training. Thus, students interested in family medicine were purposefully sampled. At the time of data collection, 15 students had switched from another specialty to family medicine, and 15 students had stayed with an initial career choice of family medicine.

Eighteen students participated in the end-of-preclinical focus groups and interviews, and 15 participated in the end-of-clinical focus groups and interviews. End-of-preclinical data were collected in 2003; end-of-clinical data were collected in 2006. The students in each of these 2 data collection years were unique to their groups. Participants were 27 women and 6 men; 14 participants were from UBC, 10 from UofC, and 9 from UofA.

These students identified influences best described chronologically: pre-medical school influences, medical school influences, postgraduate training influences, and life-in-medicine influences.

### Pre-medical school influences

Medical students reported that role models, positive and negative, were the most important influences on career interest affecting them before medical school. In some cases role models were family physicians, and in other cases they were other specialists, community members, or family members. A number of students noted the importance of rural, primarily family, physicians.

It was key because ... other than ... maybe taking my children to the pediatrician and obstetrician when I had a tricky pregnancy, all I ever saw was rural doctors. They were not only doctors but they ... got the soccer team going in town, and they spoke at grad, and they were just really influential people that helped to tie the fabric of the community together. So that's what I saw, and that's what I dealt with. (FM:FM-CLIN)\*

### Medical school influences

Two broad subdomains were found within the category of medical school influences: influences during preclinical training (primarily the years before clerkship) and influences during clinical training. Although some clinical experiences occurred before clerkship, by far the most important influences were those observed during clinical training.

**Influences during preclinical training.** Preclinical training was seen by students as a time filled with many potentially influential forces that could affect their career choices. There was little representation of family medicine in the curriculum and, when family medicine was represented, it often appeared in a negative light. Students reported that they had not "met a single preceptor who's been a family doctor" during the first 2 years of medical school, (FM:FM-PRE) and that, "The worst part is we don't have any exposure to family physicians until third year." (SP:FM-CLIN)

Negative representations of family physicians, while reported primarily in the clinical years, were also reported in the preclinical years. "When it was my turn, and at that time I said I wanted to be a small town family doc ... his eyebrows came down and his forehead wrinkled, and he pursed his lips and he goes, 'Oh, tough job, nasty job ....' In a couple of brief sentences ... he was able to paint a pretty negative picture of a family doc." (FM:SP-CLIN)

\* (FM:FM-CLIN) denotes family medicine career interest at the time of the first survey and family medicine career interest at the time of the second survey, with the qualitative data collection occurring at the end of the clinical years. (SP:FM-PRE) denotes other specialty career interest the time of the first survey and family medicine career interest at the time of the second survey, with the qualitative data collection occurring at the end of the preclinical years.

These negative representations led students to question why more was not being done to counteract the derogatory influence of these preceptors: "And I just don't understand why family medicine hasn't, you know, stepped up and said, 'You know what, this is the top of the heap, family medicine.'" (FM:FM-CLIN)

Some negative comments made by other specialists might be related to competitiveness between specialties in recruiting students to their specialty areas. "I get the feeling we are trained to get the basic medical knowledge and, you know, a lot of the lecturers that are training us are specialists and are knocking family docs and are trying to convince us to do a specialty." (SP:FM-PRE)

**Influences during clinical training.** As in preclinical training, exposure to family medicine was noted to be limited relative to exposure to other specialties during clinical training: "They want 40% to go into family medicine, and we get 3 weeks of family medicine ... it's sort of reversed thinking to me." (SP:FM-PRE) No matter how long this exposure was, role models (both positive and negative) were seen to be critically important influences during the clinical period.

Positive clinical exposure helped to confirm the decisions of those who stayed in family medicine. Positive clinical exposure working with a "good preceptor" ultimately helped to encourage those who switched to family medicine. Good preceptors were perceived as role models; they often encouraged students directly or indirectly to choose family medicine.

She loved her job. She had a lot of enthusiasm for it. She did the full-spectrum practice ... and the other doctors in the community too. It was a small community, they really, really loved their jobs .... They would call me and make sure I got there to see it, and so it was a lot of hands on, and they ... walked me through procedures I had never done. So ... I got a lot of the procedural stuff, as well as the medicine part of it. And I think overall just enthusiasm and the teamwork, and how well they worked together. And that was great. (FM:FM-CLIN)

Many students also reported observing frustrated, overworked family physicians. "It's easy for students to get that mind-set in there already, you know. Urban preceptors often have very boring family practices, you know, and they're bored, and students as a result are bored when they see that." (FM:FM-CLIN)

These negative role models were counterbalanced by family physician preceptors who modeled ways of maintaining manageable and rewarding medical practices (both personally and professionally). These role models were important in helping to sustain potential interest in family medicine. "They were all just really intelligent, competent people who had great communication skills

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and just had a good rapport with their patients. And so that just sort of reinforced the fact that ... family medicine was what I wanted to do. I wanted to be like these people." (SP:FM-PRE)

As in the students' preclinical training, many negative representations of family medicine were provided by other specialists. One student reported that he "was working with a preceptor in a specialty and they said that family doctors are equivalent to grade 12 science students. That's literally what he said." (FM:FM-PRE)

Beyond positive and negative role models, students reported that clinical training was a time to understand the nature of family medicine. This was particularly true for students who switched to family medicine and reported that their initial preferences were based on misconceptions or inaccurate information about family medicine and a strong orientation toward another specialty. Several students selected pediatrics as an initial preference because they enjoyed working with children, but later decided that they did not want to practise pediatric medicine.

When I first entered medical school, what I had chosen as specialties were obstetrics and pediatrics as my potential, and it was a completely naïve and ignorant choice. I mean I liked babies and I liked kids. And so I was like, oh, that's obviously the medicine I'm going to practise. And that changed a lot over the years in medicine. So it was not based on anything in particular. (SP:FM-CLIN)

Many of those who switched from other specialties to family medicine reported that they had not realized how varied family medicine could be until some of their experiences during medical school. This realization of the broad scope of practice often prompted students to consider family medicine as an option. "[Y]ou can make your practice more geared toward women's medicine, or HIV medicine, addictions medicine, or palliative medicine, or you just do family or general family medicine. I think it's quite flexible in that way." (SP:FM-CLIN)

In addition, many students noted that they tended to be more generalists at heart than specialists and thought they fit better into careers in family medicine. "I suspect I always will be more of a generalist in interests. I have very diverse interests in all aspects of my life, and medicine is just one of those aspects. So to specialize would probably have been too narrow a field for me. That's why I'm interested in the general type of medicine." (SP:FM-PRE)

### Postgraduate training influences

Students identified the length of residency as an important factor they considered when reflecting on which areas they might pursue as careers. The ease of matching to family medicine was seen as a negative attribute

of residency and, therefore, career. Female and older students and those who were juggling family responsibilities perceived the 2-year residency as more manageable than the longer residency periods required for other specialty areas.

It's not so much that I don't want to put in that much effort. It's the stage in my life I'm at and my age and I'm single, and it scares the crap out of me that if I do a 5-year residency, that's brutal and I hardly ever leave the hospital. I'm going to finish when I'm 35, I'm going to be single, I want to have a family ... that scares me and it's hugely weighing on my decision. (FM:FM-PRE)

Students also stated that, for them, the culture of the family medicine residency was appealing.

I just got married .... My priorities started changing, you know. I'm thinking I want to have a family. I don't want to be in one of those specialties where everyone in the residency is whispering to each other because oh, look at her, she's taking a year out to have a baby, we're all getting screwed over .... I just want to be in a residency and like, oh great, you're ... having a baby. Congratulations .... It sounds so funny, but I've seen it happen .... I've seen it during my ... student years. (FM:FM-CLIN)

A shorter family medicine residency also meant a shorter time to higher earnings. "The fact that I have over \$100 000 of debt ... makes me feel uncomfortable in a way. So I'd like to deal with that kind of as soon as possible. So I think by finishing the residency quicker, it will be easier for me to pay off that debt and get that off my head." (SP:FM-CLIN)

Choosing family medicine was often characterized by students as limiting oneself, particularly for high-achieving students who were encouraged instead to strive for something "more" than family medicine. This belief and the perceived ease of matching to a family medicine residency were seen as the 2 primary negative attributes of family medicine residency. Many students who chose family medicine residencies reported that those who had not chosen family medicine wondered whether it was a backup to their "real choice." "I don't know how many times since CaRMS I have been asked, 'Oh, what are you doing?' And I say family medicine, and everyone goes, 'But you're a good student, is that what you wanted?' 'Yeah, that was my first choice.' 'Okay, well congratulations.' Because it's the backup." (SP:FM-CLIN)

This perception of family medicine as a backup residency concerned students. "A whole bunch of people ... don't get their specialty and are going to be in family medicine because that's all that's left. Do I want

30% of my colleagues to be people who didn't want to do this in the first place? It's sort of unsettling." (SP:FM-PRE)

The concept of family medicine as a backup or second-choice residency appeared to be pervasive.

The language they use around family, and just, you know, even when you go to your final check-ins with your CaRMS advisors I was told, "You should apply to some family programs too because, you know, it'll give you more programs to apply to, and as your backup ...." And I don't like that because it should be a choice, not a fallback. The language is used by staff people, people who lecture us ... from everybody down, administration down, and then we sort of adopt that language as well. Like what's your backup? Family's my backup. (SP:FM-CLIN)

This lower prestige associated with a residency in family medicine was not the perception of students who had chosen it as their first career choice: "I think any of us could have done anything we wanted to. It's more of a decision that we wanted to do family." (FM:FM-CLIN)

A factor unrelated to many of the above residency-related factors was the perception students had of the expected difficulty practising physicians would have in retraining later in their careers. One student who switched from family medicine into another specialty was discouraged from choosing family medicine because of this.

[A specialist] said how difficult it was now to go back and retrain if you chose the residency pathway to become a family doc. He told me a story that he had worked with family docs who ... had worked in family practice and were motivated to go back to retrain in [a specialty] and how tremendously difficult it was to go back and retrain .... Do [a specialty] now because the chances of your doing it later are pretty small. (FM:SP-CLIN)

### Life-in-medicine influences

Students clearly had thought about their future lives as physicians at the end of both the preclinical and clinical years. Students reported that their perceptions that family medicine would give them the lifestyle they wanted, flexibility, scope of practice, the type of practice they wanted, and enduring relationships with patients were all positive influences on their career choices. Worries about prestige and income during their practice life were reported as concerns. "I just think that I liked the idea of the variability of family medicine." (FM:FM-CLIN)

Lifestyle is important. One day I do want to be a mom, and I want to be able to spend time with my kids, and I think family is one field where you really can make your own hours. You can make your business what

you want it to be, and you can do locums. You can work part-time; you can work full-time. I think that is what is so attractive about family medicine, is that you can really make a great lifestyle for yourself, outside of medicine. (SP:FM-PRE)

In addition, the perceived scope of medical practice, particularly in rural settings, was seen to be important to students. "I think the variety of the situations that you get in family medicine is right up there .... Like somebody would come in with a musculoskeletal and then somebody comes in with a psych, you know ... and it was really nice changing and putting on different hats." (FM:FM-CLIN)

The potential to build longer-term relationships with patients also helped to confirm decisions to choose family medicine over other specialty areas.

I like the fact that we get to develop relationships with patients and follow them long-term .... That was a big area that I really enjoyed .... I always found, especially when we did emergency medicine ... I wondered whatever happened to that patient .... It just was killing me. So I just like the fact that you do get the follow-up, and you get to see what's going on, and you get to build trust and a good relationship. (FM:FM-CLIN)

The opportunity to practise the type of medicine that is important to students was a factor in the choice of family medicine.

For me, it was definitely just my ideals. Like this dream I have of what we can make medicine, and what we can do with our patients, and how we can just change the whole world, and everyone will be healthy, and no one will have diabetes or heart attacks ever again because we're going to do such a good job of preventative medicine .... So I guess I didn't change much from the naïve girl that went into medicine. (SP:FM-CLIN)

The lower level of expected compensation for family physicians was a deterrent for many students who stayed with or switched to family medicine. "That was a big factor, actually. That was really stressful in terms of that factor making a decision because you see the amount of debt you're in, or the amount that I was in, or am in, from medical school and my previous education." (FM:FM-CLIN)

Many students who chose family medicine, however, indicated that the income level itself was not the underlying issue, but the associated lack of respect and value for similar tasks to those performed by other specialists. Students noted that family medicine was hard work and that family physicians should be fairly compensated in

comparison with their specialist colleagues: "I actually found the money issue to be insulting, not because we make less in total, but we make less for the same visits than other specialists do." (SP:FM-CLIN)

### DISCUSSION

The supply of family physicians has been identified as a critical health human resource issue for many nations, including Canada.<sup>33</sup> Understanding the forces that influence medical students' career choices will be critical in serving the health care needs of society. This study demonstrates that a large number of influences affected medical students when they were considering career choices. These influences exist along a temporal continuum from before medical school to practice life.

In the preclinical years, students reported having little exposure to family medicine and experiencing negative comments about family physicians by specialist teachers. Students thought that there should be greater exposure to family physicians in the preclinical years, but the potential effect of this exposure on students' interest in pursuing family medicine as a career is unclear.<sup>14</sup>

Students in this study stated that clinical experiences were critical to them in understanding the positive aspects of careers in family medicine. Students indicated that role models were very important to them in supporting their decisions to choose careers in family medicine, but that negative comments by physicians and negative representations of family medicine even from family physicians, undermined their desire to choose careers in family medicine. Students perceived an internal conflict between the negative representations of family physicians and their experiences with many excellent family physicians. Students found the scope of family medicine appealing, particularly as they experienced it in rural settings. Clinical experiences provided important opportunities for students to begin to imagine themselves in future careers,<sup>26</sup> and students agreed that they had misperceptions about the actual duties associated with particular careers, but that these were clarified during the clinical years. Clinical experiences, particularly in the third year, have been demonstrated to be associated with students' choosing careers in family medicine.<sup>14</sup>

It is important that in this study, at both preclinical and clinical stages, there appeared to be strong negative representations of family medicine by both specialists and family physicians. These comments, often termed "bad-mouthing," have been reported elsewhere<sup>34,35</sup> and appear to be detrimental to students' consideration of careers in family medicine.

Postgraduate training and future practice life were reported as very important in students' consideration of family medicine. Students identified the shorter, physically less demanding, family medicine residency as an

important factor when they considered a career choice. Length of family medicine and other specialty residencies was primarily noted by women in relation to their potential ability to have families, and by all participants in relation to residency-life balance.

Students identified a number of attributes of the practice of family medicine that appealed to them. The career flexibility and lifestyle afforded by family medicine was important. The scope of practice in family medicine, in both urban and rural settings, was reported as being an important consideration. Students more frequently reported the appeal of a broad scope of practice in association with rural practice, but this might be related to the family medicine clerkship at UBC being based almost entirely in rural settings. Students were aware of the differences between the incomes of family physicians and other specialists and reported that the lower income and the lower prestige of family physicians was a threat to their maintaining a career interest in family medicine.

Scope of practice, particularly in rural settings, is surprisingly not reported often in the literature as an influence on career choice.<sup>27</sup> Students also reported that careers in family medicine provided them with an excellent "fit" in relation to a generalist orientation, which many of the students described themselves as having. These life-in-medicine issues are consistent with Burack and colleagues' view of the experience of medical school as a time when students "try on possible selves."<sup>26</sup>

Although this study agreed with the findings of previous studies that factors such as early exposure to family medicine, role models, scope of practice, lifestyle, and personal fit are important to students selecting careers in family medicine,<sup>9,26-29</sup> it also highlighted a number of new areas that have not yet been identified as important influences on career choice: family physicians themselves discourage students from going into family medicine; and the length, intensity, and culture of residency training are important factors.

### Strengths

One of the strengths of this study is that it used purposeful sampling to identify prospectively 2 groups of students (those who maintained a career interest in family medicine and those who changed their career interest to family medicine) at 3 different medical schools with different cultures and different curriculum structures in an effort to explain more fully the phenomenon of sustained interest in family medicine as a career choice. In addition, a small number of students who were not interested in family medicine or who had switched from family medicine were included in this study, and their comments confirmed the comments made by the bulk of respondents who were interested in family medicine. A number of factors identified in this study are comparable to those found in a parallel quantitative project, including the influence of lifestyle,



growing up in a smaller community, and greater interest in a varied scope of practice.<sup>31</sup>

## Limitations

There was an overrepresentation of women in this study, but given that our purposeful sampling selected students interested in family medicine, this gender bias is not surprising. In addition, participants in the focus groups were primarily those interested in family medicine and were not representative of all undergraduate medical students. Their views, however, were representative of students interested in careers in family medicine.

## Conclusion

Policy makers committed to increasing the number of medical students considering careers in family medicine can choose a variety of avenues to accomplish that goal. Students interested in careers in family medicine identified factors that supported and detracted from their desire to practise family medicine. When these factors are accurate representations of practice life and are associated with students not choosing careers in family medicine (eg, income and prestige), health planners must work with governments to change them. When these factors are accurate representations of practice life and are associated with students choosing careers in family medicine (eg, lifestyle, scope of practice), medical educators and health planners must work together to promote these factors to students. When these factors are inaccurate or are inappropriate representations and are associated with students not choosing careers in family medicine (eg, perceived lower intelligence of family physicians), medical educators should take steps to correct these misrepresentations.

Specifically, medical schools could preferentially select students who report an interest in family medicine at medical school entry. Medical educators should increase the presence of family physicians in the pre-clinical years, as medical students perceive an inequity in this area. Medical schools and departments of family medicine should try to reduce the negative characterizations of family medicine by both other specialists and family physicians themselves in the preclinical and clinical years. Students should receive high-quality family medicine clinical experiences with positive role models to improve their perceptions of careers in family medicine. In addition, students should be provided with accurate information on what the training and future life expectations are for residencies and careers in family medicine. Future research should investigate what information and what kinds of experiences are particularly valuable in aiding medical students in their career choices.

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## Contributors

**Drs Scott, Wright, and Brenneis** conceived and designed the study question and methodology. **Dr Brett-MacLean and Ms McCaffrey** conducted the focus groups. All the authors worked on the analysis. **Dr Scott and Dr Brett-MacLean** wrote the first draft of the manuscript, and all the authors contributed substantially to revising it. All the authors gave final approval to the manuscript submitted.

## Competing interests

None declared

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