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Introduction

The ongoing shortage of primary care physicians worldwide is well-documented, and concerns about the implications for patient care have become increasingly urgent. However, little attention has been paid to how this shortage affects specialists. Specialist and primary care services are complexly intertwined, and the primary care shortage exacerbates existing capacity strains on specialists in profound ways.

The purpose of this study was to engage specialists in reflecting on how the primary care shortage has impacted their personal and professional lives. In addition to speaking about effects they experienced as physicians, specialists also shared many stories of how the ongoing crisis in primary care is affecting their patients. This summary report describes results for both physician and patient impacts.

Methods

The research took place in Victoria, BC, as part of the Facilities Engagement Initiative program. Two methods of participating were offered: a qualitative interview, or the opportunity to comment anonymously on an online forum. This ensured that those desiring confidentiality had the opportunity to participate while protecting their privacy.

Participants

A total of 37 individuals participated in interviews, with an additional 21 individuals participating through the online forum¹. The most well-represented specialties were psychiatry, pediatrics, and oncology. About half of forum participants did not indicate a specialty. The remainder of the specialties were represented by fewer than five participants each (see Table 1).

Tab	le 1	: Sampi	le Size	by	Specia	lty
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Specialty	N	Specialty	N
Psychiatry	10	General Surgery	<5
Pediatrics	8	Hospitalist Medicine	<5
Oncology	6	Neurology	<5
Addictions Medicine	<5	Obstetrics/ Gynecology	<5
Anesthesiology	<5	Orthopedics	<5
Cardiac Surgery	<5	Palliative Care	<5
Cardiology	<5	Respirology	<5
Emergency Medicine	<5	Urology	<5
Endocrinology	<5	Did Not Specify	10
Gastroenterology	<5		

Proportion of Unattached Patients

Participants estimated that between 10% and 65% of their current patient profile were unattached to a family physician, with a median of 50%.

¹ Due to the anonymous nature of the forum, it is not possible to ensure that there was no overlap between interview and forum participants. However, as the forum was promoted as a confidential alternative to an interview, it is likely that these 21 comments were from unique individuals, for a total sample size of 58.



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Impacts on Specialists

There were impacts to specialists' clinical practices and also to participants as individuals. Examples for each key theme identified within these areas are provided below.

Clinical Practice: Patient Flow

- Unattached patients cannot safely be discharged:
 - "[Our standard is to follow-up] every six months, for five years. And if they have a GP, I'll
 discharge them after two, so [for someone unattached] that's an additional three years of
 dealing with that patient. So, it doesn't sound like a lot, but it's quite a bit of follow-up time
 that could be used for people in active treatment or new patients." (Oncologist)
- Waitlists are ballooning:
 - "Referrals to the urgent short-term assessment, I think it's at nine months right now. So, these are people who are being seen in the emergency department for acute suicidality... and the next appointments are nine months away." (Psychiatrist)
- Higher acuity services become overloaded:
 - "There are 60 patients waiting to be seen. There's not a bed in the department to see them, so we dealt with a seizure in the waiting room. Our trauma room is full with non-trauma patients. And you're just hoping that somebody doesn't die on you through your shift because you couldn't get to them. And that's just every night shift. That is what it feels like." (Emergency Physician)

Clinical Practice: Scope

- More primary care within specialty:
 - "Over 50% of the referrals I receive could be managed by... a family doctor. 'Do a pap smear'. 'Counsel about contraception'... These are referrals that should never hit my desk... The wait lists [have] become prohibitive... You know? Every family doctor can prescribe a birth control pill." (Obstetrician-Gynecologist)
- Being asked to practice beyond specialty:
 - "It's disheartening to see people not getting the care they need. And I have to say to these men, I say, I haven't examined a prostate in 25 years. I don't think it's appropriate for me to do that... Typically, I'm going to do a PSA and hope that'll pick up some awful prostate malignancy for them. It's better than nothing." (Respirologist)

Individual: Health

- High levels of distress and moral injury:
 - "I feel that group level of distress increasing from a lack of primary care. None of us want to be closing our wait lists. I think we all would like to be serving the community and meeting the community's needs... it's a sort of an increasing sense of hopelessness." (Pediatrician)
- Inability or barriers to taking leave:
 - "When you go on maternity leave, you can... take a reduced rate for your licensing fees because you're not working. That saves you a significant amount of money... However, if you pause your license then refills won't be refilled under your name for your patients... I'm planning on taking a maternity leave. But I'm concerned about pausing my license because



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so many of my patients don't have a family doctor, and that means all of them, they won't be able to refill their medications. That could cause serious morbidity to patients... I shouldn't have to pay extra thousands of dollars for a year, when I'm not working, to keep my license, out of my own pocket. But at the same time, I'm worried about...how that will affect my patients" (Pediatrician)

- Lack of care for themselves and their families (because they are also unattached):
 - "Honestly, even just for myself, if we have any health problem in our family, I have absolutely no idea how I would get care for anybody in my family without going to emerge, because you look on walk-in clinic wait lists, and they're done by eight o'clock in the morning. They're full for the day." (Psychiatrist)

Individual: Relationships

- Professional relationships are strained:
 - "It keeps funneling up and up, and you lose your collegiality and your working relationships with these other colleagues, and you start to feel very isolated and alone in your practice. Where before... there'd be much more of a feeling of working together, [now] it much more has a sense of, this is your problem, you deal with it... I've got a million other things to deal with. So, you lose that creativity that [comes from a team]." (Psychiatrist)
- Physicians have less time for family:
 - "Every day, I'm wrestling with this knowledge of I have to balance my relationship with my kids, who I love desperately, and I want to be with, with my commitment and responsibilities for work. So, I come home at 6:30, and it's like 45 minutes before my kids are in bed, or an hour. I get to read to them... This morning, I was up at six, doing paperwork and dictations. So, I'm busy while they're getting ready for school... how can I be the parent that I thought I was going to be? We never wanted to be on the hamster wheel. We wanted to have good work-life balance. I only wanted to work four days a week. Be home at five. Be that attentive parent." (Psychiatrist)

Individual: Career

- Restricting Career Variety
 - "I work in an early psychosis program that's mandated for three years. I have patients that have been in the program for five years. And I can't discharge them from our service... I'm thinking, do I have to quit one of my jobs to be able to service the patients that shouldn't be there? So, do I need to quit my acute care job?... since 2015 I've probably cut back on 50% of the [other] outpatient work I do because the areas just keep filling up. [But in] the early psychosis program... we can't do that. So, we just get squeezed. So, the next consequence, like I said, would be probably quitting one of my other jobs" (Psychiatrist)
- Loss of Specialized Skill
 - o "I have felt that transition of how much time I spend seeing... patients who are not acutely sick and requiring resuscitative care, and I think... there's only so long you maintain skills that you're not using... I think there could be unintended consequences in the long term of what happens to these physicians like me who are just not seeing that volume [of true emergencies]." (Emergency Physician)



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- Long-Term Plans
 - o "I feel like I'm in a healthcare system with the wheels coming off. And I'm actually worried about what things are going to look like five, ten years down the road. It makes me feel uneasy and it sort of makes me wonder, sometimes I find myself thinking, looking for an exit strategy. And I really love my job." (Oncologist)

Patient Impacts

Impacts to patients included effects on health and effects on quality of care. For the latter, the BC Quality Matrix was used to analyze key themes².

Health Outcomes: Morbidity and Mortality

- Late diagnosis and decompensation
 - "Recently, I was on call at the hospital. There was a man in his fifties who... moved here a few years ago [and could not find a family doctor]. The guy was very attentive to his diet and lifestyle... But unfortunately, nobody was following his A1C or doing regular care for him... came in with a massive MI... His diabetes was completely out of control... nobody noticed because he didn't have a GP. He ultimately did very poorly." (Endocrinologist)
- Worsened symptoms
 - "[A] woman who had run out of her thyroid medication, couldn't find anybody to prescribe it... developed severe hypothyroidism. And one of the manifestations was psychosis, and she ended up admitted to hospital. And all she needed was somebody to prescribe her thyroid hormone, which she already knew she needed, but she couldn't find anybody to do it. So, it led to a completely preventable, avoidable hospitalization." (Psychiatrist)
- Early/ preventable death:
 - o "The worst part are the undiagnosed malignancies where people present with advanced cancer diagnoses that would have been picked up if they had a family physician. I have a 26-year-old patient who was diagnosed with both uterine and ovarian cancer and doesn't have a family doctor. And was symptomatic for quite a long time before she presented to an emergency department, and then was diagnosed with metastatic [advanced] disease at age 26. She had had symptoms for over six months. And so, she's going to die from her illness, and I think that's a horrific failure in our healthcare system. And I have a bucket of stories like that." (Obstetrician-Gynecologist)

Health Outcomes: Downstream Impacts

- Employment and finances are affected by ill health:
 - An unchecked manic episode, for example. Then they have to live with the consequences of this. Have they lost their job? Have they crashed their car? Have they had an affair? Have they blown all their finances? Are they now addicted to certain drugs?" (Psychiatrist)
- Caregiver burden is increased:

² The Matrix was modified slightly to combine "appropriateness" and "effectiveness". Both dimensions are related to implementing evidence-based care. While the Matrix considers these separately, the research participants tended to talk about them in tandem.



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"We're seeing people who have progressive illness... dementia that's going to get worse, and then you have behavioural problems that emerge, and care issues that emerge. And what's been happening, of course, is that with the lack of family practice, we have no partner in the community on whom we can rely... who will follow the steps and then call us or re-refer when things go south... When they do see us, their family has been struggling on without any help, and that's just appalling on every level." (Geriatrician)

Quality of Care

Accessibility

o "There's a patient that I have, just as an example, that has had aortic valve replacement with a mechanical prosthesis, which requires warfarin coagulation. His family doctor retired. He's been unable to find one now for about three years. So, he ends up having to do INR self-monitoring [and] blood pressure self-assessments. He ends up having to go to a walk-in clinic to ask for re-referral to see me... it's a travesty that somebody in their 70's is basically self-managing their cardiovascular care." (Cardiologist)

Appropriateness/Effectiveness

"A good example, I had a lovely, bright, articulate, super fun, 91-year-old man who I've seen intermittently over the years for COPD... There's no one to order his medications. He's got a cellulitis of just one of his legs... He arrives in my office with the cellulitis, not able to hear despite his hearing aids because his ears are so blocked with wax... and I don't have the equipment to syringe ears in my office. I said, Shoppers Drug Mart has these kits where you put in some oil and then there's a gentle syringe there that's safe for you to use... it's just completely unfair to have a man at that point in his life with the complexity of medical problems, what he's given to the world in his 91 years, be in this situation." (Respirologist)

Equity

"Preventative health care falls out when people don't have primary care, and the people who are most vulnerable to the effects of lacking primary care are the people who need it the most. So, people from marginalized parts of society, people with low income who can't afford to run around to different walk-in clinics and things like that. People who are immigrants and don't speak English well and can't advocate for themselves, people with mental health issues who for the same reasons can't really advocate for themselves. So, we've created this really perverted thing: if you are a relatively organized person without a lot of chronic conditions, it's not such a bad thing. Like [telehealth] does exist... But the person who doesn't speak English very well, with... chronic conditions, that's the person who needs a family doctor the most, and that's the person who's not getting care." (Neurologist)

Respect

o "They come to us at the cancer clinic after they've been diagnosed. So, there's usually some kind of journey from their first symptoms to finally getting their diagnosis of cancer. And that process, if you don't have a family doctor, is a real problem for people, because I find that they probably sit on their symptoms for longer, first of all. And then they go usually to a series of Urgent Care or ER visits. And they may not, because they're not known to those providers, I think maybe some of their symptoms aren't taken seriously. And so, there's



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often a significant delay in diagnosis... and it creates a huge amount of psychological distress for them... by the time they get to the cancer clinic, they're angry and they're scared, and they're totally disillusioned with the healthcare system." (Oncologist)

Efficiency

o "I have a guy who is a spinal cord-injured patient, and... he was going early in the morning at 6:30, seven o'clock in the morning [to the walk-in clinic, but couldn't be seen] and couldn't get his Lyrica. So, what I do? I refer him back to the podiatrist to hope that the podiatrist will refill it." (Urologist)

Safety

 "Patients presenting with very elevated, dangerous INRs [measure of blood clotting] ... and they're out in the community. The test may have been done one or two days earlier and nobody followed up that test... That makes it a very dangerous situation for these people when it comes to potential bleeds into their chest, or bleeds into their brain causing stroke." (Cardiac Surgeon)

Conclusion

Health care provision is designed in such a way that each aspect of the system relies on the smooth functioning of other aspects. When this functionality is disrupted, such as through an ongoing shortage of labour, negative impacts ripple out to all levels of service.

Despite the interconnectedness of the system and general awareness of the primary care shortage, few studies have examined these 'ripple effects' for specialist providers. This study allowed specialists to describe the impacts they were experiencing in their day-to-day clinical work, where bottlenecks in discharging patients lead to ballooning waitlists and more stringent triage mechanisms. Participants also articulated impacts on their personal and professional relationships, including their relationships with patients; as well as health impacts, particularly regarding moral injury; and effects on their careers.

Further, participants indicated that patients were experiencing negative impacts across a full spectrum of quality dimensions, resulting in greater morbidity and risk, and that primary care shortages were reverberating across the whole healthcare system, creating higher costs and more chaotic patient flow.

It is clear that the primary care shortage is having far-reaching consequences for patients. Equally clear from this study is that it is also impacting healthcare professionals in other sites, compounding the capacity strains they were already experiencing. Without sustained attention both to the labour needs and the current impacts of healthcare shortages, the system will continue to operate in a fragment, suboptimal way, putting patients at continued risk.

