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Exploration of primary care models and timely access to care in New Brunswick (Canada)

Claire Johnson[1*], Dominique Bourgoin[1], Jérémie B. Dupuis[2], Jenny Manuèle Félix[1], Véronique LeBlanc[1], Danielle McLennan[1] and Luveberthe St-Louis[1]

Abstract

Background This correlative study aimed to examine how the different primary care models (physicians in solo practice, physicians in collaborative practice, physicians and nurse practitioners in collaborative practice, after-hours clinics, community centers, or emergency rooms) were associated with their capability to offer timely access to their patients. The data collected from the primary care provider's perspective was to complete the New Brunswick Health Council results on patients' perspective.

Methods A convenience sample of 120 primary care providers (33 physicians in solo practice, 33 physicians in collaborative practice, 27 providers in collaborative practice with nurse practitioners, 2 providers working in after-hours clinics, and 10 providers in Emergency departments) responded to an online survey about their primary care models and accessibility. We used the Statistical Package for Social Sciences software to run correlations, independent t-tests and Fisher's exact tests to compare timely access to care between variable groups.

Results A positive correlation was observed between patient load (or the number of patients under a primary care provider's practice), age and years of experience. However, the patient load did not translate to more timely access to care. However, a statistically significant difference ($p=0.032$) was observed when primary care providers kept appointment slots available for daily urgent requests. When a primary care provider booked all available appointment slots, only 85% of them could offer timely appointments (in 5 days or less), compared to 97% who could deliver it when appointment slots were left open in their daily schedule. The primary care model (solo vs. collaboration), the use of health technologies and the type of provider did not significantly influence timely access to care. In contrast, the primary care providers who reported teleworking (or working remotely) were less likely to offer timely access to care.

Conclusion Timely access to care is not always available to patients, even those with a primary care provider. Certain organizational practices may improve access to care and should be integrated into primary care in New Brunswick and elsewhere in Canada.

Keywords Models of care, Primary health care providers, Timely access

*Correspondence:
Claire Johnson
Claire.Johnson@umoncton.ca
[1]School of Public Policy, Université de Moncton, Moncton, New Brunswick E1A 3E9, Canada
[2]Office of the Vice-President Academic and Research , Université de Moncton, Moncton, New Brunswick, Canada

Introduction

In New Brunswick (Canada), 90% of citizens are affiliated with a primary health care provider, including 86% with a family physician and 4% with a nurse practitioner. However, only 51% of these have access to a primary care provider in a timely manner (within five days) [1]. As a result, many patients use other options for their primary health care. Recent data from the New Brunswick Health Council illustrate the issue of timely access. They revealed that only 57% of citizens report seeing their regular care providers for their basic medical needs [1]. The remainder uses alternative models of care, such as walk-in clinics or emergency rooms [1]. In short, timely access to primary health care remains challenging in New Brunswick [2], and appears to be worsening across Canada [3].

A study in Quebec, Canada, found that access to primary health care is related to the profile of physicians and the organizational characteristics of care models [4]. A study in New Brunswick, Canada, found that several organizational factors influence timely access to primary health care. For example, primary healthcare providers who mostly work in primary care, measure their performance, offer extended office hours, and maintain time slots for daytime emergencies are more accessible than their colleagues who work differently [5]. In addition, most studies on access to primary care are descriptive and do not examine the organizational factors that could influence timely access to primary health care [6]. Consequently, it remains unknown how the different models of primary health care and related organizational practices may affect timely access to primary care, as little research has examined this topic in Canada.

Worldwide, there are a multitude of primary healthcare models. As a general observation, there is a tendency to move away from solo physician primary care towards collaborative interdisciplinary collaborative care models [7]. However, different countries will adopt slight variations in models of care to provide primary health care to their populations [6, 8]. In a comparative study on primary care in countries similar to Canada [6], Finland had collaborative teams where physicians worked in interdisciplinary teams. The Finish primary healthcare model has increased patient satisfaction and continuity of care [9]. The Netherlands has developed a 24-hour network of after-hours physicians' collaborative care model to avoid overcrowding in emergency departments [10]. In Norway, many family physicians work in collaborative practice, typically in groups of 2–6 physicians work together [11]. Family physicians in Norway are required to keep slots open daily for urgent concerns [6, 11]. In the United Kingdom, there is a strong push towards multidisciplinary collaborative practice [7], but uptake is lower because of the strong culture of solo practitioners [6]. The patient experience is studied extensively in the United Kingdom, but with little objective measure of timely access to primary health care [12].

Table 1 Description of the sample ($n = 120$)

Health Care Providers	Number	Average age	Sexe (%)
Physicians	78	44	32 M (41) 46 F (59)
Nurse Practitioners	42	43	10 M (24) 32 F (76)
Total	120	44	42 M (35) 78 F (65)

In New Brunswick, various primary health care models exist, including solo practice with one family physician, collaborative practice with multiple family physicians, and collaborative practice with family physicians and nurse practitioners [13]. In addition, after-hours clinics and emergency rooms are typically used when timely access to a regular provider is unavailable [1, 5, 14, 15]. The utilization of these primary health care models differs across geographic health zones in the province. Table 1 below identifies the health zones in New Brunswick and the proportion (%) of people who reported using each type of care model. The zones are divided as follows: Moncton (zone 1), Saint John (zone 2), Fredericton (zone 3), Madawaska (zone 4), Restigouche (zone 5), Bathurst/Acadian Peninsula (zone 6) and Miramichi (zone 7) (NBHC, n.d.). Patients who do not have a regular primary care provider, known as orphan patients, represent 10% of the population or nearly 80,000 citizens and are more likely to use alternative models of care, such as walk-in clinics or emergency rooms [1].

In New Brunswick, the context for health needs is unique due to the aging population and chronic disease prevalence. In 2021, 22.5% of the province's citizens were 65 and older, compared to 18.5% of the Canadian population [16]. This is compounded by the high prevalence of chronic disease (often correlated with age): 62% of the New Brunswick population had at least one chronic disease, and 23% had three or more chronic diseases [17]. This implies that primary healthcare needs are typically complex and require follow-ups to promote adequate continuity of care. According to Marshall et al. (2021), citizens with inadequate access to a primary healthcare provider experience many challenges. Most will attempt to consult with various primary healthcare providers to meet their health needs in the absence of a family physician. This lack of access can result in delayed diagnosis, high stress levels, lack of ongoing support, and negative feelings or feelings of abandonment. All these consequences can have an impact not only on the health of individuals but also on the healthcare system. Indeed, if diagnoses are delayed, incorrect or absent, the demand for family physicians will increase. As a result, the gap between supply and demand could worsen [18]. A delay

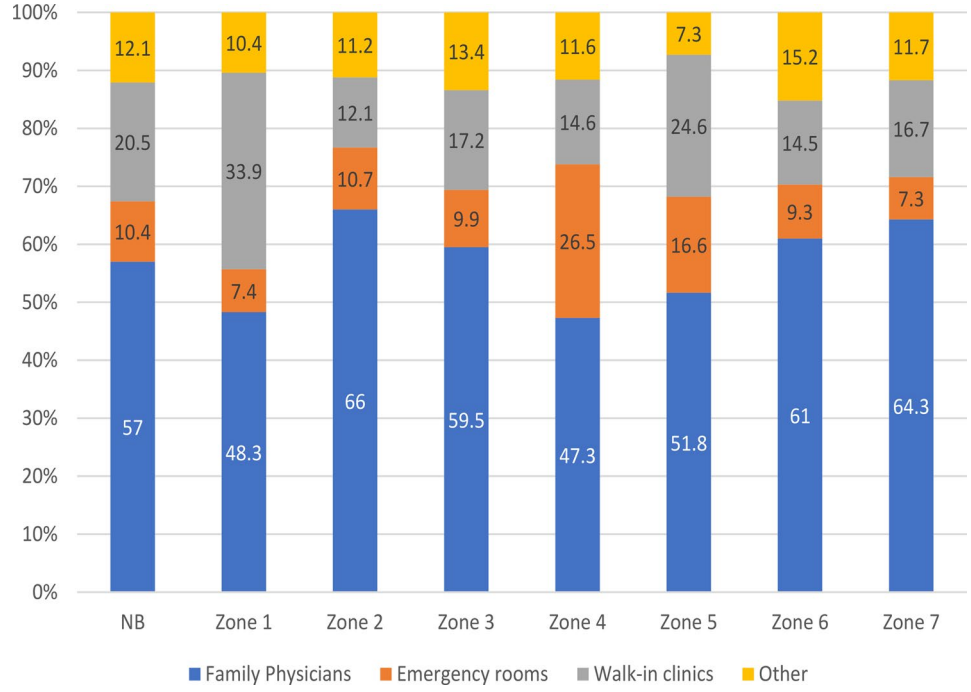

Fig. 1 Most frequently used primary care models by zone [1]

in diagnoses may also increase the complexity of the medical condition and subsequently require more specialized and complex care. Lastly, access (sometimes called equitable access or timely access) is a popular quality indicator used when evaluating healthcare [19] and one of the basic principles of social responsibility in medicine [20].

Currently, there is a gap in knowledge in New Brunswick on how primary healthcare models and organizational practices influence timely access to care providers. The New Brunswick Health Council collected data from citizens on their perspectives regarding timely access to primary healthcare and the type of primary healthcare model used in New Brunswick [1]. The data is presented in Fig. 1. In addition to the patient's perspective, our exploratory study aims to add the perspective of family physicians and nurse practitioners on primary health care models, organizational practices and timely access to primary care. Specifically, this study aimed to identify factors and organizational practices from various primary healthcare models that could influence timely access to care.

Methods

Our study presents a descriptive and correlational analysis of primary healthcare models in New Brunswick through data collected from primary healthcare providers in the province. A convenience sample totalling 120 primary healthcare providers (78 family physicians and 42 nurse practitioners) agreed to participate in this study. The response rate is 13% for family physicians, with 78 participants out of approximately 593 [21]. For nurse practitioners, the response rate was 42%, with 42 participants out of roughly 100 nurse practitioners in primary care [22]. The College of Physicians and Surgeons of New Brunswick publishes a list of active physicians in the province, and we contacted all of them listed as family physicians, asked if they worked in family medicine, and recruited those who did [23]. In addition, we phoned all the after-hours clinics listed on the Medical Society on the New Brunswick website and recruited the physicians and/or nurse practitioners working there [24]. Inclusion criteria were to be an active family physician or nurse practitioner working in primary healthcare and actively affiliated with one of the two regional health authorities in the province. Exclusion criteria included specialist physicians, retired primary care providers, or those exempt from practicing in New Brunswick.

The survey used in this study was a combination of a survey previously used in a study in New Brunswick called Timely Access to Primary Care in New Brunswick: Variability across health regions [5]. We added questions about primary healthcare models available in the province and their influence on accessibility. The questions in our survey on timely access to care matched those from the New Brunswick Health Council survey on patients' experience [25]. We also added some questions from another study by Haggerty et al. (2004), which includes questions about the primary care provider's profile (e.g., gender, years of work experience, job satisfaction). The

survey also includes questions about the organizational structure of the primary care model [4]. In total, there were 31 questions in both English and French. The questionnaire was designed online using Survey Monkey (see Appendix 1 for a copy of the survey). Consent was provided before accessing the online survey. It was also made available in paper format, suitable for faxing, to accommodate primary care providers.

Data collection and analysis

Data collection took place over five weeks between March and April 2022. Physician offices or other work sites were reached by telephone. Those who agreed to participate were sent, either by fax or electronic email, the survey, a brief description of our study, an explanation of the process, and information about participant rights. All identifying information was removed from the forms before data entry. The anonymized data was then inputted into International Business Machines' "Statistical Package for the Social Sciences" software, version 28 [26], to process the collected data. Before performing the main analyses, cleaning procedures were done to ensure that the data was suitable to be analyzed. First, as the data was automatically uploaded into the database via SurveyMonkey, errors in manual data entry were a non-issue. However, missing data can still be problematic. Frequency tables were verified for all variables to check for missing data. Fortunately, most variables had between 1 and 4% of missing data, making little impact on the overall sample. However, 30% of the data was missing for the patient load variable. To explore this issue further, chi-square analyses were performed to identify potential mechanisms that explained this missing data. No mechanisms were identified, meaning that the missing data was random. The missing data was left untreated and was not replaced by the sample average or by informed approximations. Finally, standardized values were examined to identify univariate outliers and only three were identified. All three univariate outliers did not stray too far from the distribution and were all from the total number of family physicians or nurse practitioners in a practice. Upon closer examination, these numbers were deemed to be plausible; therefore, no transformations were made. The dichotomization of some variables was done to facilitate the interpretation of results. For the main analyses, descriptive analyses were performed using frequency tables and cross-tabulations. Analyses using the Pearson correlation coefficient (r) were used to explore relationships between continuous variables. Fisher's exact tests were performed to analyze related categorical variables.

Ethical approval

Ethical approval was granted by the Human Research Ethics Committee of the Université de Moncton (file 2122-075) for our study. Each participant provided their consent in writing for participants who used the paper version of our survey or by clicking the "accept" button, following the written description of our study on the online survey.

Results

Table 1 below is a description of our study's sample. In our study, 120 primary care providers, including 78 physicians and 42 nurse practitioners, completed the survey. Participants ranged in age from 30 to 74 years, and the sample included 42 men and 78 women.

In Fig. 2, the sample lists participants in each zone of the province, grouped according to the primary healthcare models. The figure presents the proportion (%) of participants for each model of care ($n=120$).

Table 2 illustrates the positive and statistically significant correlations between age, years of experience and patient load. This increased patient load and higher number seen per day did not result in faster access. There was also a negative correlation (statistically significant) between the number of participants in collaborative practice, years of experience, and the number of patients under the care of the primary care provider. According to these results, new primary care providers (those with fewer years of experience) are more likely to work in collaborative practice, but generally, their practices are smaller.

The results of Table 2 on correlations are supported in Table 3, where comparisons of means (independent t-tests) between providers and their ages illustrate the same trend. Providers over the age of 50 have an average patient load of 1420, while providers under the age of 50 have an average of 1032 patients. This larger patient load does not translate to faster access. According to the survey results, there is no significant difference ($p=0.278$) between the number of days waiting for an appointment for providers under 50 years of age (2.3 days on average) and those over 50 years of age (1.8 days on average).

According to the results in Table 4 on organizational practices, 92% of participants reported they provided an appointment to their patients in less than five days. When looking at this result by care providers, 97% of respondents from the Anglophone health network (Horizon) could provide an appointment to their patients in less than five days. In contrast, only 85% of providers could offer the same in the Francophone health network (Vitalité). In addition, the method used to schedule appointments allows them to provide more patients with timely access to care. With open time slots for emergencies, 97% of providers offer access within five days. In contrast, only 85% of providers offer an appointment in less than 5 days when appointments are filled in advance with no time slots for emergencies. Lastly, primary care providers

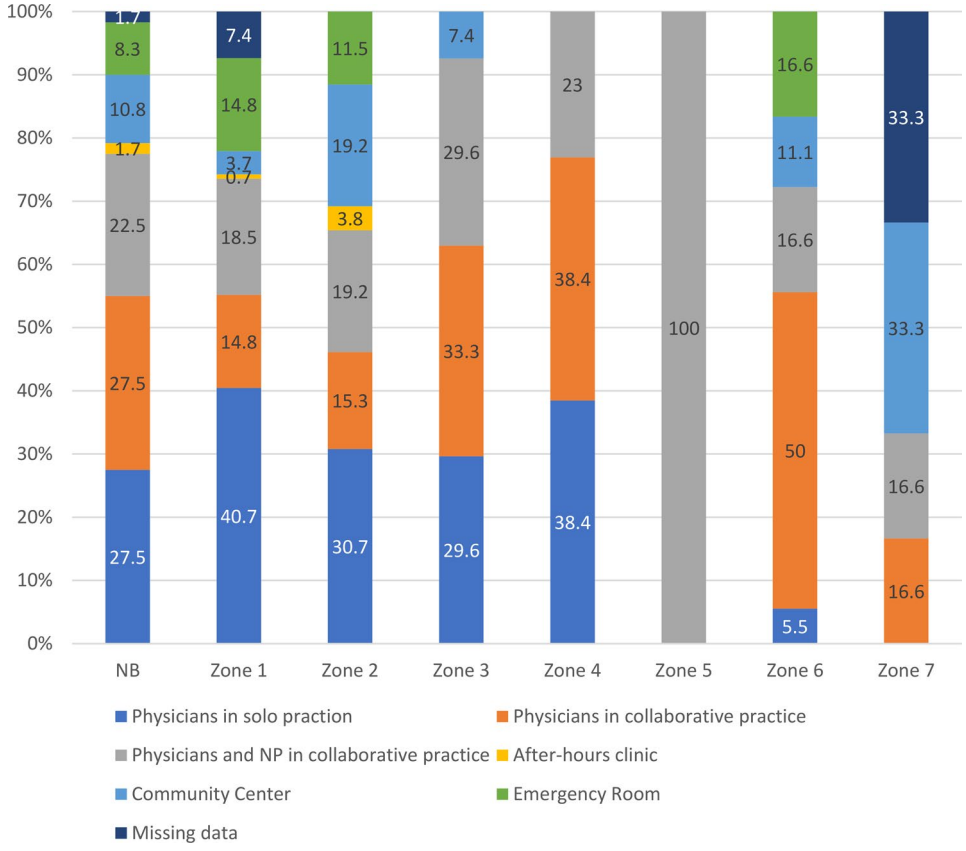

Fig. 2 Distribution of providers by primary health care model by geographic zone. NP: Nurse Practitioners NB: New Brunswick

Table 2 Correlations (*r*) between provider profile, patient load and timely access

Variables	Age	Years of experience	Patient load	Number of days to get appointments
Years of experience	0.887**	1	0.555**	–0.085
Collaborative practice	-0.189	-0.265**	-0.356**	-0.181
Patient load	0.494**	0.555**	1	–0.112
Number of patients seen per day	0.248*	0.340**	0.603**	0.017
Number of days to get appointments	-0.181	–0.085	–0.112	1

*Statistically significant correlation at the $p<0.05$ level

**Statistically significant correlation at the $p<0.01$ level

Table 3 Practice factors by age of primary care providers

	Age of provider	*n* (%)	Average	t(df) and *p*
Patient load of provider (average)	Under 50 years old	49 (64.5)	1032	$t(74) = -2.504$ $p = 0.014$*
	Over 50 years old	27 (35.5)	1420	
Number of patients seen per day (average)	Under 50 years old	72 (72.0)	21	$t(98) = -1.774$ $p = 0.079$
	Over 50 years old	28 (28.0)	25	
Number of days to get appointments (average)	Under 50 years old	69 (69.0)	2.3	$t(98) = 1.090$ $p = 0.278$
	Over 50 years old	31 (31.0)	1.8	

Note Differences between means were assessed with independent t-tests

df = degree of freedom

*Significance level $p<0.05$

who work out of their offices instead of teleworking are more likely to offer timely access to care. At the same time, the model of care (solo vs. collaborative practice) does not appear to influence it.

Discussion

Organizational factors

The main finding of our study was that appointment scheduling and working from the office positively

Table 4 Timely access to primary care by organizational practices

		Timely access		
		Appt < 5 days *n* (%)	**Appt > 5 days *n* (%)**	***p***
Regional Health Authorities	Vitalité (Francophone Network)	35 (85)	6 (15)	0.039*
	Horizon (Anglophone Network)	60 (97)	2 (3)	
Type of provider	Physician	61 (90)	7 (10)	0.260
	Nurse practitioner	34 (97)	1 (3)	
Model of care	Solo	26 (87)	4 (13)	0.191
	Collaborative	65 (94)	4 (6)	
Appointment scheduling	Time slot for emergencies/ same-day appointment	62 (97)	2 (3)	0.032*
	No time for emergencies/same-day appointment	33 (85)	6 (15)	
Telemedicine	Yes	28 (97)	1 (3)	0.283
	No	67 (91)	7 (9)	
Telephone consultation	Yes	85 (91)	8 (9)	0.428
	No	10 (100)	0 (0)	
Telework	Yes	19 (79)	5 (21)	0.016*
	No	76 (96)	3 (4)	
Sample total		95 (92)	8 (8)	

Note Differences in accessibility were assessed using Fisher's exact test because there was not always a minimum of 5 participants per box

*Significance level $p<0.05$

influenced providers' ability to offer timely access to care. Of the organizational factors studied, appointment scheduling appeared to be the most effective in promoting timely access. Our results indicate a significant difference between primary care providers who offer access within 5 days they have time slots available for daily emergencies compared to providers without time slots for daily emergencies (97% with daily time slots offer timely access vs. 85% without daily time slots, $p=0.032$). Our results suggest a reduction in timely access when all appointments are scheduled in advance (traditional model of appointment scheduling). Ontario researchers Fournier et al. (2012) reached similar results in their study on advanced access to care to decrease wait times [27]. They suggest that when primary care providers leave 50–65% of their time slots free for patients who request same-day appointments and only 35–50% for pre-scheduled appointments, this practice promotes timely access to care [27, 28]. This model focuses on the more immediate needs of patients and offers many benefits, including increased patient satisfaction, decreased wait times for appointments, improved administrative procedures, and reduced provider stress [27, 29].

In the traditional model of appointment scheduling (where all appointments are scheduled in advance), the request for an urgent appointment is either denied or added to an existing appointment as a "double booking" [30]. Similar to our results, traditional appointment scheduling generally underperforms in terms of timeliness and accessibility. Reduced accessibility outcomes in primary health care can adversely affect the entire healthcare system because when a person perceives their health problem as urgent and their request for an appointment with their regular primary care provider is denied, they often seek care in an alternate setting, such as in the emergency room [30, 31]. This practice is costly as emergency room services are more expensive and may increase overcrowding [32]. In New Brunswick, the average cost of a consultation with a family physician is roughly 46.50 Canadian dollars (CAD), and a similar consultation in the emergency room costs CAD 192.17 [33]. In addition, patients who go elsewhere for care deemed urgent and complex will often request follow-up with their primary care providers afterwards, causing service duplication [1, 33].

Provider profile

Provider profiles are associated with a larger patient load and a larger number of patients seen daily, but not with timely access to health care. Our results in Table 2 illustrate positive and statistically significant correlations between age, years of experience, patient load and number of patients seen daily. That means, our results suggest that older providers with more experience tend to have larger solo practices, and they see more patients daily. However, seeing more patients daily and having bigger patient loads does not translate to more timely access to care, as the correlation between the days waiting for an appointment does not follow the same positive correlation pattern. In contrast, the correlation (between the number of patients seen per day and the number of days waiting for an appointment) is negative or not statistically significant, suggesting that with a higher patient load and more daily appointments, these providers do

not necessarily provide faster access. This phenomenon has been described in previous research. A study in Ottawa supports this by arguing that larger practices typically reduce accessibility [34]. Furthermore, these findings could explain why most people in New Brunswick have a primary care provider but still lack timely access to care [1, 35].

These observations remain consistent with our results in Table 3, indicating that providers aged 50 years and older have an average patient load 1.4 times larger (1420 patients for these providers vs. 1032 patients for those 50 years and younger, $p=0.014$). A Winnipeg study reports similar results, with older family physicians carrying 1.5 times the load of their younger counterparts [36]. Such trends raise concerns about the future burden on family physicians. The retirement of older providers will likely result in many patients without a primary healthcare provider (orphaned patients). These orphaned patients may have difficulty finding a family physician as younger primary care providers accept fewer patients into their care [34, 36]. At the same time, this will have implications for staffing because when a primary care provider retires, it will require at least 1.5, if not 2, people to replace them [37], increasing the need for primary care providers to avoid weakening the supply of primary healthcare services. This increased need for human resources may also increase the risk of primary care provider shortages in New Brunswick. Primary healthcare is known to have been neglected in Canada since there has been an emphasis on specialized healthcare in the last decades [20].

Our results also suggest that younger primary care providers are more likely to engage in collaborative practice, given the negative correlation observed in Table 2 between age, years of experience, and collaborative approach. Indeed, this correlation indicates that collaborative practice decreases as age and experience increase (r=-0.265**). Other studies have also found this trend in teamwork among younger people [38]. A recent study in France illustrates the choice of younger physicians (40 to 45 years old) to work collaboratively in rural or periurban health centres [39]. Family health teams in Ontario and family medicine groups in Quebec are models of collaborative practice that have improved accessibility and comprehensiveness of care through greater flexibility in their time slots, increased use of technology, and an interdisciplinary approach [2, 40–42]. Similarly, Family Medicine New Brunswick aims to improve access and work-family balance for primary care providers using technology and collaborative work [43].

Health technologies

Our study found a significantly larger proportion of primary care providers (96% vs. 79%, $p=0{,}016$) offer timely access when they work out of their office, compared to those who reported working from different locations (telework) [44, 45]. This suggests that when a primary care provider works remotely (or does telework), it may increase wait times for an appointment to see them. The medical field has been slower than other professions in embracing the working-from-home trend [46]. However, during the COVID-19 pandemic, it became more feasible to work from various locations because primary care providers used the telephone and telemedicine to provide patient care safely [47]. Generally, the evidence related to telework is self-reported on perceived productivity. Most people working from various locations reported being more productive than working from the office [44, 48, 49]. Only 10% of people reported being less productive when working from home [49]. The data on productivity while engaging in telework is mixed and depends on factors such as a favourable family environment, technology that works properly and a physical environment conducive to work [48]. With our study, the alternate work location is unknown; therefore, it is possible that the participants were working from a hospital or another environment unfavourable to efficient work. The choice of an alternate work environment could explain the lower rates of timely access to care observed in our results in participants who reported doing telework. More research is needed to gain information on telework among primary care providers.

Furthermore, the use of technology is typically believed to improve timely access to primary care [50, 51]. However, the results of our study do not show an increase in accessibility when telemedicine ($p=0.283$) or telephone consultations ($p=0.428$) were used. These results differ from some research that has highlighted the beneficial effects of telemedicine in its various forms (telephone or video consultations, virtual visits, remote exams, and digital prescriptions) to improve accessibility [47, 52, 53].

Citizens' vs. providers' perspective

Timely access to primary health care is an important indicator of the quality of care related to patterns of care and population needs. Our results were analyzed to verify how many participants offered access to immediate care (less than 24 h) and timely access to care (less than five days) to their patients. The indicators used in our study to assess immediate and timely access to care (24 h and five days) were to match the one used by the New Brunswick Health Council to compare the data from the citizens' and the providers' perspectives [1, 15, 25, 35]. Based on our results, 32% of participants (providers) reported providing access to care to their patients in less than 24 h (data not shown), which was similar to the rates reported by citizens (30% said having access in less than 24 h) [2]. However, perspectives diverge when comparing

the timely access to care using the five-day indicator. According to primary care providers in our study, 92% of them reported providing timely access to care (within 5 days) to their patients. This diverges from the perception of patients/citizens in New Brunswick based on the data collected by the New Brunswick Health Council [1], where they found that only 51% of patients in the province reported having timely access to primary healthcare. Such a large gap prompts us to question this discrepancy between provider and patient perspectives. The perception of urgent care for people with chronic illnesses or symptoms may differ from that of physicians. These patients may insist on immediate appointments. On the other hand, physicians understand that other more acute health problems are potentially of higher priority and deserve to be managed more promptly [29]. There is also the time required to reach a provider's office. It may take several days before a patient can speak with an administrative or medical staff member. In the context of our study, research assistants sometimes had to make several phone calls before reaching someone at the providers' offices (even during business hours when someone was supposed to take the calls). Providers may not be aware of these delays, but this wait is part of the patient's journey. However, these data were not reported in this study but could be the subject of future research to understand this invisible barrier better.

Limitations

This study has a small sample size and low response rate, which could affect the validity and reliability of the findings. Our observational and correlational study does not allow a causal relationship between the analyzed variables to be established. Furthermore, our study can only present observations from the perspective of primary care providers, as they were the only type of participant. In addition, given that the results of our study are self-reported and mostly based on estimates, the results could include social desirability and recall bias.

Conclusion

Our study suggests that some younger primary care providers practice medicine differently than their predecessors. These differences may affect service delivery and the human resources required to provide primary care in New Brunswick. Since we generally observed that provider's age and years of experience could influence their orientation toward collaborative practice, we may see more young physicians and nurse practitioners choosing this practice model. However, this trend must be confirmed by future studies as it goes beyond the scope of our study. As observed in our study, collaborative practice alone may be insufficient to improve timely care access. In addition to collaborative practice, other strategies should be considered to improve timely access to primary care.

Our study also illustrated that primary care providers aged 50 and older tend to have larger practices or patient loads, so more patients are in their care. However, the findings in our study suggest that a larger practice does not necessarily ensure timely access to primary care. This may explain why timely access remains challenging even though most New Brunswickers have a regular primary care provider. Having regular access to the same primary care providers may be helpful since the healthcare needs are becoming more complex in New Brunswick, partly because the population is aging faster in the province than elsewhere in Canada. In addition, people living in New Brunswick have a higher proportion of chronic diseases, which means people may benefit from primary care following an interdisciplinary collaborative approach and regular follow-ups with the same providers. Many people in New Brunswick who do not have timely access to their primary care provider may seek medical care elsewhere (from a walk-in clinic or an Emergency room, for example). Specific strategies, such as keeping daily appointment slots open for urgent requests and encouraging primary care providers to work from the office, may improve timely access to care. Other initiatives that are generally believed to improve access may not automatically improve accessibility (for example, telework, health technologies, and collaborative practice). These strategies could be combined to increase timely access to care, but they require more research to improve our understanding of their impact on timely access to primary care in New Brunswick.

Abbreviations

NP Nurse Practitioners
NB New Brunswick

Supplementary Information

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Supplementary Material 1

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Not applicable.

Author contributions

CJ, DM, DB and VL conceptualized the study. CJ and JMF wrote the main manuscript text. CJ, DB, VL, DM, LS and JBD did the writing review and editing. CJ, JBD and VL designed the statistical analysis. DB, CJ, LS and DM developed the survey. All authors collected data. JBD, VL and CJ interpreted the results and prepared the tables. DM managed the project and coordinated all research activities under CJ's supervision. All authors reviewed and agreed to the published version of the manuscript.

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Data availability
The data generated during the current study is not available in a publicly accessible repository because the Université de Moncton does not have a place to store datasets. However, the dataset used could be available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
The research ethics committee at the Université de Moncton granted this study ethics approval and a reference registration number (file 2122-075). All methods followed relevant guidelines and regulations from the Université de Moncton ethics committee, including the requirements for obtaining **informed consent** from **all participants.** As such, all participants provided consent to participate by signing the consent form when responding to the survey by fax or clicking on the accept to participate button before responding to the online version. We confirm that informed consent was obtained from all participants.

Consent for publication
This is not applicable since this study since there is no information about an individual person.

Competing interests
The authors declare no competing interests.

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