Michelle Ng, MD, CCFP, Wynn Tran, MD, CCFP, Patricia Gabriel, MD, MSc, CCFP

Uptake of a free province-wide telephone interpretation service by family physicians in BC

Research and policy are needed to address barriers to the use of professional interpretation services by BC family physicians in order to better serve patients with limited English proficiency.

ABSTRACT

Background: Publicly funded telephone interpretation for family physicians in British Columbia has been available since 2017 through Provincial Language Services. However, there has been no published literature on its usage.

Methods: We performed a quantitative and descriptive analysis of data from Provincial Language Services for all users who accessed telephone interpretation through the Primary Care Telephone Interpreting Service Pilot Project from 2017 to 2020. These data were then compared with publicly available data on populations and physicians in BC.

Results: Of 23 484 interpreted telephone calls between November 2017 and December 2020, most (86%) were made in Vancouver. Arabic and Farsi represented 58% of all calls. There were 15.1 calls per 100 people with limited English proficiency during the study period. Average call duration was 21 minutes (range 1 to 266). Monthly usage increased from 164 calls in November 2017 to 927 calls in December 2020. In 2020, an estimated 1.9% of primary care visits involving language barriers used telephone interpretation.

Conclusions: Uptake of interpretation services has increased but remains low among BC family physicians; barriers to this should be explored.

Note: Access **Appendices** and **Tables S1–S6** at bcmj.org.

Dr Ng is a clinical instructor in the Department of Family Practice in the Faculty of Medicine at the University of British Columbia. Dr Tran is a clinical instructor in the Department of Family Practice in the Faculty of Medicine at UBC. Dr Gabriel is a clinical assistant professor in the Department of Family Practice in the Faculty of Medicine at UBC.

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Background

In our increasingly multicultural society, language barriers are prevalent in health care. Patients with limited English proficiency face health care disparities, including reduced preventive health care, increased use of diagnostic tests, increased hospitalizations and adverse medication reactions, decreased satisfaction with health care, and disparities in confidentiality and informed consent.[1] Using professional interpreters reduces communication errors, increases satisfaction with care, corrects disparities in health care use, and improves clinical outcomes for patients with limited English proficiency more than using ad hoc interpreters such as family or staff members.[2]

In British Columbia, Provincial Language Services has provided telephone interpretation in hospitals since 2003, and a 2014 pilot project brought this service to family physicians in six municipalities.[3] This was received favorably by family physicians who used the service,[3] and it was expanded into the Primary Care Telephone Interpreting Service Pilot Project in October 2017, thereby making Provincial Language Services interpretation available to all family physicians at no cost.[4] However, our experience suggests that this service is not used consistently.

Existing literature indicates that language interpretation is underused in most health care settings, including primary care,[5,6] even when it is provided free of charge.[7-10] Additionally, while a few primary care clinics provide interpretation to a meaningful number of patients, they are a minority.[9,11] Recognized barriers to using interpretation include lack of awareness of interpretation services or the perception that access is difficult to arrange[3,5,9] and the perceived adequacy and convenience of using ad hoc interpreters, second-language skills, or gestures, despite issues with accuracy and confidentiality.[12,13] However, there has been no published BC-specific literature since publicly funded telephone interpretation was made available in primary care province-wide through the Primary Care Telephone Interpreting Service Pilot Project.

We describe the pattern of uptake of the Primary Care Telephone Interpreting Service Pilot Project by BC family physicians and highlight areas where it may be underused.

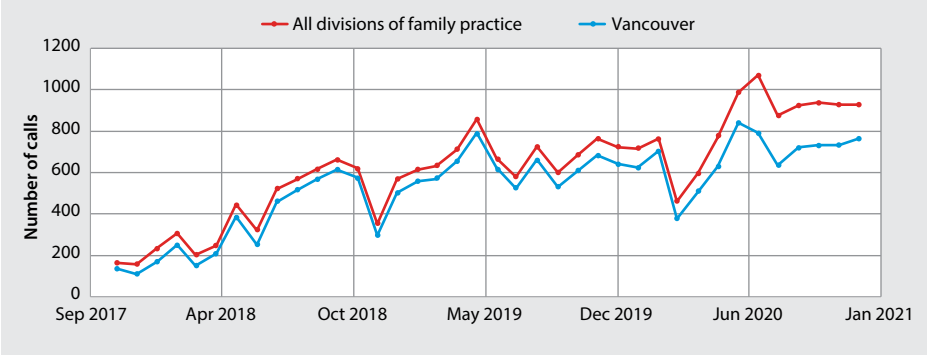

FIGURE 1. Monthly call volume.

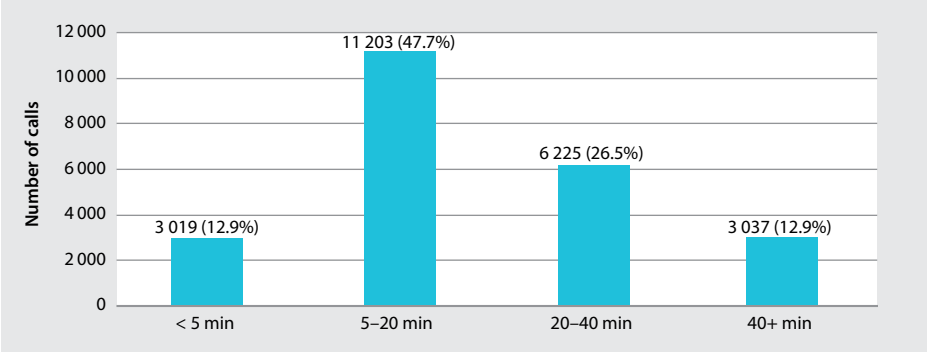

FIGURE 2. Call duration.

TABLE 1. Languages requested by BC family physicians for interpretation, November 2017 to December 2020, compared with the number of speakers who had a single response for mother tongue (data from Provincial Language Services and the 2016 Canadian census).

Language	Number of calls in BC (%)	Number of calls in Vancouver (%)	Number of speakers in BC, by mother tongue (single response, % of non-English)
Arabic	10 076 (42.9)	9 450 (47.1)	17 480 (1.3)
Farsi	3 459 (14.7)	3 406 (17.0)	43 470 (3.3)
Spanish	2 467 (10.5)	1 899 (9.5)	47 010 (3.5)
Somali	1 067 (4.5)	1 061 (5.3)	1 270 (0.1)
Tigrinya	1 020 (4.3)	904 (4.5)	410 (0.03)
Vietnamese	1 016 (4.3)	358 (1.8)	27 150 (2.0)
Mandarin	769 (3.3)	240 (1.2)	186 325 (14.1)
Cantonese	429 (1.8)	279 (1.4)	193 530 (14.6)
Dari	429 (1.8)	427 (2.1)	Not listed (closely related to Farsi)
Sorani	418 (1.8)	388 (1.9)	Not listed (central Kurdish dialect)
Punjabi	356 (1.5)	228 (1.1)	198 805 (15.0)
Sudanese Arabic	255 (1.1)	252 (1.3)	Not listed (various varieties of Arabic in Sudan)
All other languages	1 723 (7.3)	1 176 (5.9)	

Methods

Data were requested from Provincial Language Services for all telephone interpretation calls made from all divisions of family practice in BC from November 2017 to December 2020. For each call, we requested the date, duration, language requested, geographic region, and name of the caller. Our primary outcomes were total number of calls per month, total number of calls per language, total number of calls per geographic region, average length of call, and proportion of family physicians that used the service, as well as frequency of usage by individual family physicians. Data analysis and graphing were performed using Microsoft Excel. Data were compared to publicly available data on physicians in BC (e.g., College of Physicians and Surgeons of BC directory, Google search results) to identify demographic patterns among the top 10 users. We used publicly available census and billing data to estimate limited English proficiency prevalence in the 10 divisions of family practice with the highest usage, as well as to estimate limited English proficiency encounter frequency (see Appendixes 1 and 2 and Tables S1 and S2 at bcmj.org for detailed calculations).[14-16] Data were stored on the primary investigator's OneDrive account at the University of British Columbia. This study was approved by the UBC Behavioural Research Ethics Board and the Provincial Health Services Authority's FOI Office, Information Access Privacy.

Results

General statistics

Between November 2017 and December 2020, 23 484 calls were made through the Primary Care Telephone Interpreting Service Pilot Project. Usage increased over this period from 164 calls in November 2017 to 927 calls in December 2020 **[Figure 1]**. The median and average call durations were 16 minutes and 21 minutes, respectively (range 1 to 266 minutes). Calls between 5 and 20 minutes made up most of the calls **[Figure 2]**.

Languages requested

The most requested languages were Arabic and Farsi; they made up 58% of the calls during the study period. **Table 1** shows the top 12 languages requested through the Primary Care Telephone Interpreting Service Pilot Project and compares this with the number of people in BC who described each language as their only mother tongue in the 2016 Canadian census.[15]

Regional patterns

The Vancouver Division of Family Practice accounted for 85.5% (n = 20 068) of the calls made during the study period; Surrey–North Delta was the second highest at 3.6% (n = 838). For all of BC, the number of calls per 100 people with limited English proficiency was 15.1. Vancouver had 46.9 calls per 100 people with limited English proficiency, followed by Nanaimo (38.4) and Shuswap North Okanagan (38.4). From there, the ratios declined significantly, with South Okanagan Similkameen and White Rock–South Surrey at 11.8 and 11.3, respectively **[Figure 3]**.

Vancouver

When examining the use of the service in Vancouver, patterns were similar to those for the rest of BC. The volume of calls increased over the course of the study period **[Figure 1]**. The top 12 languages were similar, but there were higher percentages of Arabic, Farsi, Somali, Tigrinya, Dari, Sorani, and Sudanese Arabic, and lower percentages of Spanish, Vietnamese, Mandarin, Cantonese, and Punjabi **[Table 1]**.

Caller patterns

Usable caller name data were available for 22 423 calls; 7159 had unique caller names. There were numerous misspellings of caller names, which resulted in the data generating more unique caller names than there are family physicians in BC. Of those users who made at least two calls, most (87.5%) had infrequent use (2 to 12 times) during the study period **[Figure 4]**. The top 10 users made 5219 calls, or 22.2% of all calls, during the study period. Six of those users were identified through the College of Physicians and Surgeons of BC directory: all of them were male, working in urban settings in the Lower Mainland, with 6 to 42 years of practice. Five had English only listed on the public directory, and one was bilingual. Of note, one of those users was a specialist physician (hematology). Of the four callers not identified in the College's directory, all were in an allied health position (two registered nurses, one nurse practitioner, and one social worker). Nine of the top 10 users called from the Vancouver division; the other user called from Surrey–North Delta.

Frequency of encounters with limited English proficiency

Based on calculations made using publicly available MSP billing data and BC-specific census language statistics, we estimated that in 1 year, 602 817 primary care visits in BC involved patients with limited English proficiency. Adjusting for the possibility that language concordance with the patient's physician negated the need for an interpreter, we estimated that 524 752 primary care visits required interpretation each year. Detailed calculations are provided in Appendix 2 and Table S2 at bcmj.org. Based on this, the 9948 calls made through the Primary Care Telephone Interpreting Service Pilot Project in 2020 account for 1.9% of visits that likely required interpretation.

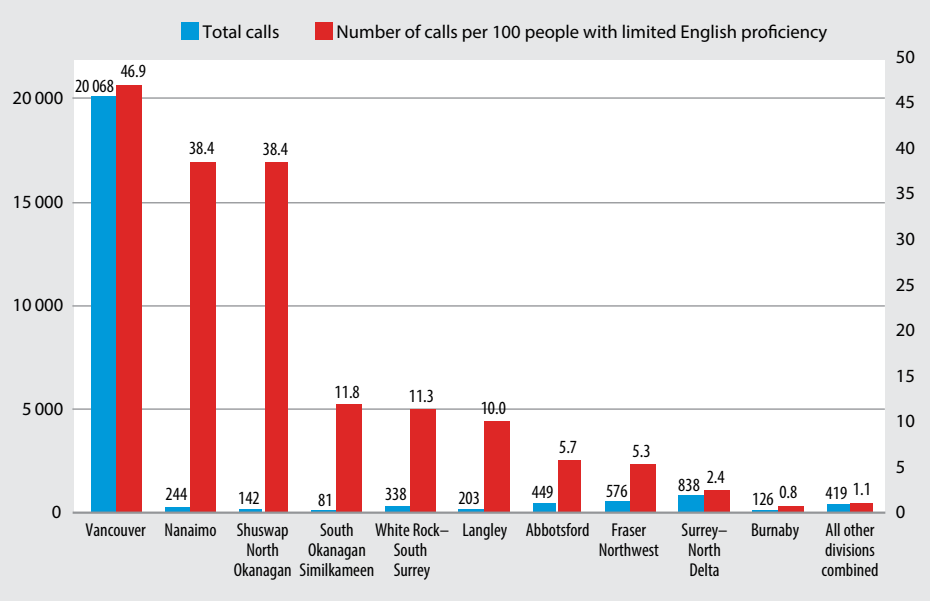

FIGURE 3. Number of calls by division of family practice.

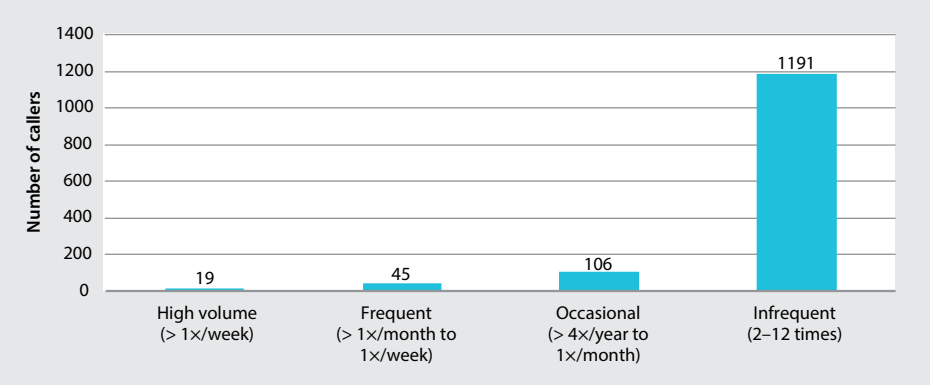

FIGURE 4. User groups, excluding one-time users.

Discussion

While our results are consistent with low rates of use of interpretation services previously reported in other jurisdictions,[8,17,18] they provide new information on the use of telephone interpretation services in family medicine in BC. This is clinically relevant because BC has one of the highest levels of interpretation services for primary care across Canada.[19] Our estimate that 1.9% of primary care visits involving language barriers used telephone interpretation suggests that the Primary Care Telephone Interpreting Service Pilot Project is still vastly underused despite its widespread availability.

Barriers to uptake of interpretation in primary care that were previously identified include time pressure and preference for alternative strategies such as using ad hoc interpreters or getting by without interpretation.[3,5,9] However, our findings suggest that use of telephone interpretation does not result in exceedingly longer visits: most calls are less than 20 minutes in duration. Moreover, the use of telephone interpretation may result in a more effective and efficient visit compared with alternatives such as using translation applications or ad hoc interpreters who are not professionally trained.

The most requested languages did not correlate with the prevalence of non-English mother tongues. We hypothesize that one reason for this is migration trends. During the study period, five of the most requested languages (Arabic, Tigrinya, Farsi, Kurdish, and Dari) were among the most common mother tongues of resettled refugees in BC,[20] whereas the prevalence of Farsi, Spanish, and Vietnamese may be due to Iran, Mexico, and Vietnam being among the most common source countries of temporary residents.[21] Patterns of interpretation usage may be a result of care provided to these populations, wherein the need for interpretation may be more obvious. A summary of these open government data is provided in **Tables S3–S6** available at bcmj.org.

A second reason why the most requested languages did not correlate with the prevalence of non-English mother tongues could be language concordance between physicians and patients. The most common non-English languages—Punjabi, Mandarin, and Cantonese—are spoken in 13.6% of BC homes, which lends strength to the assumption that there are more health care providers who are able to converse in these languages; therefore, they do not need to use interpretation.[15] Additionally, there could be a greater availability of family members who speak English among longer-established immigrant communities, which could result in an increase in the use of ad hoc interpretation.

Our estimate that 1.9% of primary care visits involving language barriers used telephone interpretation suggests that the Primary Care Telephone Interpreting Service Pilot Project is still vastly underused despite its widespread availability.

As expected, the use of interpretation appeared to be highest in areas where newcomers live. Vancouver, which had the highest regional usage of interpretation, is the intended destination for nearly 80% of new permanent residents and resettled refugees.[20,22] Higher usage of interpretation in the Okanagan could be partly explained by the presence of temporary foreign workers, many of whom come from Mexico; they face structural barriers in accessing health care[23] and may not be well represented in census data.

While the greatest uptake of the interpretation service was in Vancouver, usage in Surrey was lower than we expected, given the large number of people who live there who have limited English proficiency. The use of interpretation in Surrey and similar communities with a high number of people with limited English proficiency may be lower due to the presence of language-concordant physicians. Additionally, Vancouver may have had a greater use of the interpretation service because more physicians were aware of it; nine of the top 10 users were from Vancouver.

A small number of users made up a large proportion of the telephone calls, which is consistent with previous literature.[3,9] One study of a free pilot interpreting service in Ireland showed that the top six general practice users booked 58% of the interpretation sessions.[9] The pilot study in BC noted that more than one-third of the calls were made by a clinic with a large Bhutanese population.[3] We suspect that given the substantial number of incorrect spellings of caller names in the data, the frequency of use is underestimated, and the top 10 users likely made up a larger percentage of the total call volume.

While there was a general trend toward increased usage of the telephone interpretation service over the course of the study period, there was a decrease in March 2020. This was likely due to the onset of the COVID-19 pandemic in Canada and the subsequent decrease in people seeking medical care. However, usage quickly rebounded, and by June 2020, the monthly call numbers had surpassed the previous volumes. It is possible that the increased use of technology in health care, which has greatly increased since the COVID-19 pandemic, may have contributed to physicians feeling more familiar and comfortable with incorporating technology into primary care visits.[24]

We identified a gap within health care for people with limited English proficiency. While the reasons for this gap have yet to be identified for our specific region, our findings have implications for future intervention and policies. We suggest that more education initiatives directed at family physicians in BC regarding the accessibility of free telephone interpretation could play a beneficial role. Future research should explore the barriers to using telephone interpretation among BC family physicians.

The College of Physicians and Surgeons of BC released a new practice standard in April 2023 that emphasizes the importance

of addressing language barriers when obtaining consent to treatment, highlights some of the concerns with use of family members and ad hoc interpreters, and recommends professional interpretation.[25,26] Provincial Language Services provides telephone interpretation for more than 200 languages; it is easily accessible to BC family physicians; is available 24 hours a day, 7 days a week; and is often available on demand, although prebooking may be required for some less common languages.[27] Physicians must contact this service exclusively, but point-to language cards can be printed off for patients to use. Additionally, with funding from Doctors of BC, a pilot project conducted in 2023 made this service available to community specialists. See the **Box** for details on how to access this service.[28]

Study limitations

Our study has several limitations. First, given the high number of inaccuracies in the spelling of caller names, we were unable to accurately calculate the frequency of use of the interpretation service or the proportion of family physicians that used it. Second, we relied on publicly available aggregate data (e.g., 2016 census, MSP billing); therefore, our estimates of limited English proficiency prevalence and encounter frequency may differ from the true population values. Third, we were unable to obtain information on calls made in October 2017 due to a difference in data collection and storage methods.

The use of telephone interpretation may result in a more effective and efficient visit compared with alternatives such as using translation applications or ad hoc interpreters who are not professionally trained.

Fourth, our outcome of user patterns was limited by the availability of information in the College of Physicians and Surgeons of BC directory. We were unable to ascertain information on other factors that could play a role in the use of interpretation services, such as practice settings that specifically support people with limited English proficiency, payment structure, and availability of other interpretation services. Last, we did not examine reasons for and against use of telephone interpretation among health care providers.

Conclusions

While usage of the publicly funded telephone interpretation service in BC has increased since November 2017, uptake is still low among family physicians. Uptake was highest in Vancouver and for languages that are common among refugee and new immigrant groups. The duration of calls was within the typical time frame of a primary care visit. Future research and policy should examine and address barriers to using professional interpretation services by BC family physicians, with the goal to better serve patients with limited English proficiency.

BOX. Instructions to access telephone interpretation services and obtain access codes.[27,28]

How to access telephone interpretation services

1. Call the phone number for your group:
   a. Family physicians: 1 844 340-8224 or 1 877 228-2557
      (Contact your division for which of these phone numbers to use.)
   b. Specialists: 1 833 718-2154
2. Select the language required.
3. Enter your access code (4 digits; see below).
4. State your first and last name.
5. Wait for the interpreter to come on the line (typically 30–60 seconds).

How to obtain access codes (no sign-up is required for this service)

- Family physicians (three options; access codes are required for all divisions):
  - Log in to the members-only page of your division of family practice.
  - Contact your division for the code directly.
  - Search "interpreter services" on Pathways.
- Community specialists:
  - Email sscbc@doctorsofbc.ca.

Competing interests

None declared.

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