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Qualitative Research

# Just a click away: exploring patients' perspectives on receiving care through the Champlain BASE™ eConsult service

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## Abstract

**Background.** Excessive wait times for specialist care can have a substantial negative impact on health outcomes. The Champlain BASE™ (Building Access to Specialists through eConsultation) eConsult service based in Ottawa, Canada has demonstrated the ability to improve patients' access to specialist care.

**Objective.** We interviewed patients who were treated using eConsult in order to explore their attitudes towards the service and their experiences of receiving care via the service.

**Methods.** We conducted a thematic analysis of patient interviews using a constant comparative approach. Patients whose primary care providers used the eConsult service in their care were contacted by telephone between June 2015 and January 2016 and completed 15-min semi-structured interviews.

**Results.** Of 43 contacted participants, 30 completed interviews (70%). Over half of all respondents ( $n = 16$ ) reported receiving a follow-up call or appointment within 1 week, and 26 stated that eConsult was useful in their case. Participants unanimously agreed that eConsult was an acceptable way to access specialist care, and 29 stated that they would ask their primary care provider to use eConsult on their behalf in the future. Three themes emerged from the thematic analysis of patient comments: access, acceptability of eConsult and strengthened role of the primary care provider.

**Conclusions.** Patients expressed acceptance for eConsult as a model for improving access to specialist care, had largely positive experiences with it as a model of care delivery, and supported its use in their future care.

**Key words:** Access to care, doctor–patient relationship, primary care, quality of care, qualitative research, rural health.

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## Introduction

Poor access to specialist care is a serious issue. Excessive wait times can result in duplication of tests and other inefficiencies, causing frustration for providers and anxiety for patients and their families (1,2). The long-term effects of delays can be severe,

reducing patients' ability to carry out daily activities, impeding attendance at work or school and resulting in poorer overall health outcomes (2,3).

In an effort to improve wait times, many countries have implemented electronic consultation (eConsult) services (4,5). An

eConsult service provides a secure means of asynchronous online communication between PCPs and specialists, allowing the primary care provider (PCP) to pose a patient question and receive a detailed reply from a specialist, which they can use to treat the patient themselves or determine whether a face-to-face referral is needed (6–9). Research has indicated high levels of satisfaction with eConsult services among health care providers, who regularly cite increased access to specialists, reduction of face-to-face specialist visits for patients and improved inter-provider communication (10–15).

While providers' attitudes towards eConsult services are well reported, less has been said regarding patients' experiences. A systematic review of eConsult systems found that while a number of studies explored patients' satisfaction with eConsult services, they relied on multiple choice surveys or simply asked patients to rate their overall satisfaction on a numeric scale (4). These measures reported high satisfaction among patients, but did not capture the nature of their actual experiences of receiving care via eConsult services or their views on the advantages and disadvantages associated with the use of this technology. Given a prevalent shift in health care systems towards more patient-centred care (16), a complete and nuanced understanding of patients' experiences with and attitudes towards eConsult services is needed to ensure such services are effectively meeting their needs. The purpose of this study is thus to explore patients' attitudes towards eConsult and their experiences with the service as a means of receiving care.

## Methods

### Design

We conducted a thematic analysis of patient interviews.

### Setting

The Champlain BASE™ (Building Access to Specialists through eConsultation) eConsult service is located in the Champlain health region of Eastern Ontario, Canada. The region is 17 714 km<sup>2</sup> in size and houses a population of 1.2 million. Population density ranges from 2051 people per square kilometre in the region's main urban centre (Ottawa) to seven people per square kilometre in its rural districts. Residents of rural districts must travel to Ottawa for most forms of specialty care, necessitating journeys of up to two hours (100 km) by car. The demographic and health profiles of the population correspond to those of the rest of Ontario and Canada (17).

### The Champlain BASE eConsult service

The eConsult service began as a conversation between a PCP (CL) and an endocrinologist (EK) over the long wait times their patients faced for specialist care. When devising a solution, we chose an asynchronous model over a synchronous model (e.g. telephone, video conference), since the latter type requires more infrastructure and faces challenges in scheduling, as both providers must be in the office and available at the same time. As Ontario privacy policy prohibits the transmission of any patient health information by email, we decided to use a secure online application hosted on Microsoft SharePoint software. The service can be accessed remotely via username and password from any electronic device with an internet browser, and meets all Canadian privacy legislation. Recruitment has been largely word of mouth, with new specialty groups (from an initial 5–102 at present) added based on PCP request. Providers receive no additional incentives to join the service.

To use the service, PCPs (i.e. family physicians or nurse practitioners) log onto the secure platform, complete a brief form detailing their question, attach any relevant files (e.g. images, test results) and select a specialty group. A case assigner allocates the question to a specialist in the chosen field. The specialist responds within 1 week with advice on how the PCP can treat the patient, a recommendation for a referral or a request for more information. If the PCP decides that a face-to-face referral is appropriate, they can refer the patient to a local specialist using their traditional referral process. The specialist who receives this referral is not necessarily the one who conducted the eConsult.

Over the course of the more than 25 000 cases completed to date, specialists have responded in an average of 2 days, and over two-thirds of cases have been resolved without the patient requiring a face-to-face specialist visit (18). Conversation between providers can continue until the PCP chooses to close the case and completes a brief survey. Specialists self-report the time spent answering the case (indicated in five-minute intervals) and are remunerated at \$200/hour prorated. PCPs can bill the provincial health insurer \$16 per case.

### Participants

All patients whose PCPs used eConsult to obtain specialist advice on their behalf were eligible to participate in the study. At the conclusion of the recruitment period, the eConsult service had enrolled 937 PCPs (784 family physicians and 153 nurse practitioners) from 322 clinics in 87 towns/cities across Ontario, most of which were located in the Champlain region.

### Data collection

We sent emails to all PCPs enrolled in the eConsult service asking them to facilitate patient recruitment. Between 1 June and 31 December 2015, participating PCPs informed patients about the study whenever they used eConsult in the patient's care. If patients expressed interest in participating, the PCP requested permission for the study team to contact them. If the patient agreed, the PCP faxed their contact information to the study team.

A member of the study team contacted patients by telephone 4–6 weeks after their visit with their PCP and conducted a fifteen minute semi-structured interview. First, participants were asked to discuss their recent experience with the healthcare system in which their PCP used eConsult on their behalf. Next, participants discussed their attitudes towards eConsult in terms of its use in their care, any benefits or drawbacks they perceived, and its potential effectiveness as an alternative to traditional face-to-face specialist referrals.

Patients were asked to provide basic demographic information (e.g. age, gender) and, if they were comfortable doing so, their Ontario Health Insurance Plan (OHIP) numbers. OHIP numbers are unique identifiers issued to all residents of Ontario for the purpose of accessing their public health insurance benefits, and can be linked with health data stored in provincial databases to facilitate additional quantitative analysis.

### Data analysis

Interviews were recorded, transcribed and imported into NVivo™ software to aid in data analysis. The study team conducted a thematic analysis of interview transcripts using a constant comparative approach as described below (19,20). Members of the research team included a family physician (CL), endocrinologist (EK), research manager (LC), research associate (IM), research assistant (JJ), senior

project manager in enabling technologies (AA) and project coordinator (MR), who together provided a range of clinical, research and technical viewpoints.

The research team selected three transcripts at random, which three team members (JJ, IM, MR) read and coded individually without any preconceived themes (21). They compared the results of their initial coding and designed a broad preliminary framework, which they used to code the remaining cases. The team members met regularly to compare codes and develop a complete coding framework. Reviewers then exchanged transcripts and recoded them using the established framework to ensure accuracy. Upon acceptance of the framework, the reviewers presented their findings to senior members of the study team (CL, EK, AA, LC) to ensure concordance of the data and identify any disconfirming elements. The team continued to review and compare codes until they reached consensus.

## Results

A total of 43 individuals authorized their PCPs to send their contact information to the study team. Of these, 11 could not be contacted and 2 declined participation. The remaining 30 individuals participated in telephone interviews between 1 July 2015 and 31 January 2016. The majority of participants were female and half were aged fifty or older. Complete demographic information is available in Table 1.

Ninety-three percent of participants ( $n = 28$ ) provided the reason for their PCP visit. Common issues included skin ailments such as rashes or dermatitis (25%), cardiac issues (21%), follow-up for tests such as bloodwork or a pap smear (18%) and pain (11%). Over half of patients ( $n = 16$ ) received follow-up from their appointment (either in person or by telephone) within 1 week, seven patients waited 1–2 weeks, five waited 2–4 weeks, one waited longer than 4 weeks and one could not recall. Common outcomes included advice for treatment or next steps ( $n = 9$ ), referral to a specialist ( $n = 7$ ), recommendation of testing ( $n = 7$ ) and prescription of medication ( $n = 3$ ).

Most participants reported positive experiences with the eConsult service. Twenty-six participants stated that the service was useful in their situation, and all 30 participants stated that eConsult was an acceptable way to access specialist care. (Table 2) Twenty-one participants agreed that eConsult was an acceptable alternative to traditional face-to-face consultations, while eight qualified that it was an acceptable alternative in some cases but not others, and one disagreed. When asked if they would request that their PCP perform an eConsult on their behalf in the future, 25 participants said yes and four said they would for some cases but not others. When asked whether they had any privacy issues about their information being shared electronically through eConsult, 28 participants (93%)

**Table 1.** Demographics of participants in telephone interview ( $n = 30$ )

Characteristic	N	%
Gender		
Female	18	60
Age		
0–16	5	17
17–29	3	10
30–49	7	23
50–65	6	20
65+	9	30

expressed no concerns. However, only nine patients were willing to share their OHIP numbers with the research team.

In our analysis, three key themes emerged from the text: access, acceptance of eConsult and strengthened role of primary care.

## Access

When asked what they liked about the eConsult service, nearly all patients mentioned the service's speed. Many patients noted that they received follow-up from their initial appointments far more quickly than expected: 'she took photos of both my hands [and] sent them through the eConsult and within 24 hours I was back in the office.' Several patients compared their eConsult experiences with the long wait times associated with traditional specialist referrals: 'if I wanted to see them [the specialist] face-to-face it would have taken possibly months.' The majority of patients perceived accessing specialist advice as burdensome or time consuming, and appreciated eConsult's ability to expedite the process.

Several patients discussed eConsult's potential to benefit patients living in rural or remote areas, who often face especially long or costly trips to receive specialist care: 'I live in a more remote location [...] A lot of the specialists probably aren't going to be here, so [eConsult can] save me a trip to Ottawa.'

A few patients also mentioned eConsult's ability to improve accessibility from an economic standpoint by reducing costs to themselves and the Canadian populace more broadly, as the service can result in 'lower cost for the taxpayer, [because] the doctors can see more patients.'

## Acceptance of eConsult

Acceptance of the service was universal among participating patients. Many patients appreciated the quality of advice they received through eConsult. Patients commonly described the service as helpful. Several patients stated that they were unfamiliar with the technology prior to its use in their care and felt it was a

**Table 2.** Participants' perspectives on the eConsult service provided by telephone interview between 1 June 2015 and 31 December 2015 ( $n = 30$ )

Characteristic	N	%
Do you think that the eConsult service was useful in your situation?		
Yes	26	87%
No	4	13%
Unsure	0	—
Do you think that the eConsult service is an acceptable way to access specialist advice?		
Yes	30	100%
No	0	—
Unsure	0	—
Do you think that the eConsult service is an acceptable alternative to face-to-face specialist consultations?		
Yes	21	70%
No	1	3%
Unsure	8	27%
Would you ask your PCP to use the eConsult service on your behalf in the future?		
Yes	25	83%
No	1	3%
Unsure	4	13%

good idea: 'It was fairly new to me when I went to this new facility and I was really kind of pleased [...] what a great way and efficient way to do something versus to continually going back to the office.' A few patients expressed feelings of reassurance after being treated using eConsult: 'it just kind of gives me a bit of peace of mind knowing that there's more than one person involved in making the decision.'

In addition to the speed of eConsult responses, the majority of patients liked its ability to avoid unnecessary referrals altogether: '[eConsult] saves me having to take a day off work to sit around a waiting room all day just to find out that there was really no point in coming here.' Even when they ultimately received a referral for a face-to-face visit with a specialist as an outcome of the eConsult, several patients stated that the information their PCPs received allowed them to get the necessary tests or procedures completed ahead of time, reducing the overall timeline of their care.

[My PCP] obviously got enough information from the specialist to feel comfortable to simply tell me to come back for a blood test in three months' time. So it certainly would have been more inconvenient if I had been referred to a specialist, perhaps only to be told by the specialist [to] go and get another blood test.

Several patients mentioned that avoided referrals did not benefit just themselves, but physicians as well: '[if] I waited, I don't know, probably six months to go to a gynecologist and I didn't have to go, it would have been kind of a long six months. And kind of a waste of the gynecologist's time.'

When discussing the acceptability of eConsult as an alternative to traditional face-to-face referrals, several patients qualified that eConsult was preferable in certain cases but not in others: 'it would depend on the balance. [...] if I had to wait six months or get the eConsult, I guess it would depend how serious the issue I was facing was.'

### Strengthened role of primary care

When asked to specify what they liked about the eConsult service, a majority of patients discussed its ability to allow PCPs to draw advice from a broad group of specialist knowledge. Most of these patients described having positive relationships with their PCPs, but noted the limitations faced by one physician attempting to diagnose and treat a wide array of conditions: '[family] physicians are very skilled but there's different physicians that [...] practice in different fields. [...] Our doctor, he's a general practitioner and if he needs advice, it's just a click away.' By facilitating PCP-specialist communication, eConsult made patients feel that their PCPs could draw on a wide pool of knowledge, making the family doctor 'a one-stop-shop for healthcare.' Furthermore, some patients stated that eConsult allowed PCPs to reassure themselves in their chosen course of treatment, where their lack of certainty may have otherwise instigated a referral: '[eConsult] allows the doctor to confirm what she's saying [...] and whether you need to follow up further or whether you have a sufficient answer to your problem.'

According to several patients, allowing PCP and specialists to communicate electronically also resulted in more efficient care. These patients stated that eConsult helped reduce the delays, frustrations and logistic challenges associated with coordinating multiple tests and appointments: 'I felt like my G.P. can have the conversation about my medical history or the relevant information that needs to get passed on gets passed on, that I'm not responsible for that.'

A few patients appreciated that eConsult allowed their PCP to serve as their advocate during an interaction with the chosen

specialist. These patients described having positive relationships with their PCPs, and supported the idea of having a trusted medical professional intercede on their behalf: '[Your PCP]'s familiar with you as a patient and all of your medical records and also the type of individual that you are. [...] If you go and see a specialist, your family doctor may cover more ground and bring some different insights into it.'

Conversely, when asked to name any disadvantages of the eConsult service over traditional face-to-face referrals, patients most commonly cited not being able to speak to a specialist in person. While some patients did not mind or even preferred the absence of direct interaction with specialists, others noted that by avoiding a specialist visit they were unable to get information firsthand or ask follow-up questions directly: 'in person I could have asked [the specialist] other questions that maybe my doctor wouldn't have thought of.' However, despite these concerns, the overwhelming majority of patients considered these drawbacks to be an acceptable tradeoff for the service's benefits: 'In an ideal situation it would be better [to see a specialist in person]. But I'd rather get a quick answer as I did in the case of the eConsult.'

### Discussion

Our study found that patients had predominantly positive experiences with the service and largely described eConsult as an effective way to access specialist care. A substantial majority of patients felt the service was useful in their case and reported that they would ask their PCP to use eConsult on their behalf in the future. Their discussion of the service addressed issues of access, acceptability of eConsult and the strengthened role of the PCP.

Our findings agree with previous studies of patient attitudes towards eConsult services, which frequently report high levels of satisfaction (4,5). A systematic review of studies reporting on eConsult services worldwide identified ten studies from six services reporting on patient satisfaction, with satisfaction rates ranging from 78 to 93% (4). The studies found in the literature used written surveys with multiple-choice or Likert scale responses to report patient satisfaction, and are thereby unable to evaluate patient experiences in detail. To our knowledge, our study is unique in its direct and nuanced examination of patients' experiences in being treated using an eConsult service.

When asked about privacy issues pertaining to the service, the vast majority of patients expressed no concern with their personal health information being sent to a specialist provider. Trust in the security of the service was high, and patients were willing to allow their information to be shared with other health professionals if it resulted in more timely, efficient care. However, this leniency with privacy details did not extend to providing OHIP numbers, which a majority of patients declined to do. This contrast suggests a prevailing sense of trust in and appreciation for their PCPs, whom nearly all patients saw in a positive light. In different ways, the three themes that emerged from our analysis—access, acceptability of the service and strengthening the role of PCPs—spoke to patients' desire for greater continuity of care among health care providers. They saw PCPs less as gatekeepers than as navigators and advocates who could alleviate some of the frustration and anxiety associated with seeking specialist care. Many healthcare systems are striving to strengthen primary care and provide care closer to home (22). In the United States, many care providers have embraced the Patient-Centered Medical Home, a model of care in which a PCP leads a team of individuals (linked virtually or in the same clinic)

who provide holistic care to patients (23,24). An expansion of this model called the Patient Centered Medical Neighborhood includes providers outside of a primary care clinic setting, including specialty clinics, community and social services and hospitals (25,26). Other countries have adopted similar priorities. In Canada, the College of Family Physicians has recommended that practices across the country adopt a medical home model of providing care, and team-based practices such as Family Health Teams and Family Health Centres have become increasingly common (27). Likewise, the Australian Commission on Safety and Quality in Healthcare issued a series of five policy recommendations on how the healthcare system can better assess patient perspectives and provide more patient-centred care (28). Healthcare providers have embraced these models of care, though implementation has only just begun and challenges with linkages have been encountered (29,30). Our findings, though based on a small sample, suggest robust support among patients for this kind of inter-professional care, as the patients in our study favoured the efficiency and reassurance associated with provider collaboration.

Our study has some limitations. While eConsult is available in several regions across Ontario, the majority of participating PCPs practice in Ottawa or its surrounding communities, and consequently all patients were residents of this region or, in one case, a neighbouring region of Quebec. This limits the generalizability of our findings. Our study also has the potential for participation and social desirability biases, as patients whose recent healthcare experiences had been positive may have been more likely to agree to participate in our telephone interview, and participants in the study may have felt uncomfortable disclosing negative experiences. While our findings provide insight into patients' perspectives based on their own personal experience with eConsult, further research is needed to explore their experiences with the interface between primary and specialty care in more detail. Areas for additional research include a comparison of health outcomes between patients treated using eConsult versus those who received traditional referrals, and a case series following patients treated using the eConsult service over an extended period.

## Conclusion

Patients' experiences in receiving care via eConsult were largely positive, and the majority supported its use in their care. Nearly all participating patients found eConsult to be useful in their situation, considered the service a viable alternative to face-to-face consultations and agreed they would ask their PCPs to use eConsult on their behalf in the future. Themes of access, acceptability of the service, and the strengthened role of PCPs emerged from patients' comments. A better understanding of patients' interest in and support for eConsult services can act as an invaluable inducement for healthcare providers to consider using such services in their practices.

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Ethical approval: the study was approved by the Research Ethics Boards of the Ottawa Health Science Network and Bruyère Continuing Care.

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