Evaluation of the implementation of single points of access for unattached patients in primary care and their effects: a study protocol

Mylaine Breton,1 Catherine Lamoureux-Lamarche,1 Véronique Deslauriers,1 Maude Laberge,1,2,3 Josée Arsenault,4 Isabelle Gaboury,1 Marie Beauséjour,1 Marie-Pascale Pomey,5 Aude Motulsky,6 Annie Talbot,7 Annie St-Yves,8 Mélanie Ann Smithman,1 Nadia Deville-Stoetzel,1 Carine Sauvé,4 Sabina Abou Malham1

ABSTRACT

Introduction Attachment to a primary care provider is an important component of primary care as it facilitates access. In Québec, Canada, attachment to a family physician is a concern. To address unattached patients’ barriers to accessing primary care, the Ministry of Health and Social Services mandated Québec’s 18 administrative regions to implement single points of access for unattached patients (Guichets d’accès première ligne (GAPs)) that aim to better orient patients towards the most appropriate services to meet their needs. The objectives of this study are to (1) analyse the implementation of GAPs, (2) measure the effects of GAPs on performance indicators and (3) assess unattached patients’ experiences of navigation, access and service utilisation.

Methods and analysis A longitudinal mixed-methods case study design will be conducted. Objective 1. Implementation will be analysed through semistructured interviews with key stakeholders, observations of key meetings and document analysis. Objective 2. GAP effects on indicators will be measured using performance dashboards produced using clinical and administrative data. Objective 3. Unattached patients’ experiences will be assessed using a self-administered electronic questionnaire. Findings for each case will be interpreted and presented using a joint display, a visual tool for integrating qualitative and quantitative data. Intercase analyses will be conducted highlighting the similarities and differences across cases.

Ethics and dissemination This study is funded by the Canadian Institutes of Health Research (# 475314) and the Fonds de Soutien à l’innovation en santé et en services sociaux (# 5-2-01) and was approved by the CISSS de la Montérégie-Centre Ethics Committee (MP-04-2023-716).

INTRODUCTION

Health systems with strong primary healthcare (PHC) have been shown to have better outcomes and lower costs and to be more equitable.1–3 Access to PHC is a key component of a well-performing health system4 and improves health outcomes, particularly among disadvantaged populations.5 6 Yet, inadequate primary care access remains a major challenge worldwide. Inadequate access to PHC has consequences for patients and providers as well as policy makers and decision makers. It leads to reduced prevention and health promotion services and to deleterious health effects such as higher mortality rates, increased risks of adverse health outcomes, poorer chronic disease management and delays in obtaining care. Lack of access also contributes to non-optimal use of resources, such as higher utilisation of the emergency department for non-urgent conditions, potentially avoidable hospitalisations and higher costs for the healthcare system.7 5 6

Having a regular primary care provider (ie, family physician or nurse practitioner)
is widely recognised as a prerequisite to timely, accessible, continuous, comprehensive and well-coordinated healthcare services. The primary care provider is often the entry point to the health system. In Canada, 15% of patients do not have a regular provider. To address the critical need for attachment, defined as ‘a policy intended to improve access to and continuity of care with a primary care provider’, seven of the 10 Canadian provinces implemented centralised waiting lists (CWLs) for coordinating the supply of primary care providers with the demand of patients for attachment. These waiting lists generally aim to centralise unattached patients’ requests for a primary care provider in a given jurisdiction and to match unattached patients with providers based on availability of the primary care workforce and, in some cases, medical needs. Patients are linked to a provider through a formal agreement where the provider is responsible for the care of the patient. However, the delay for attachment to a primary care provider through CWLs varies among and within jurisdictions. For example, in Québec, patients without a chronic disease may wait up to 6 years before attachment to a family physician.

Although health equity is part of the Quintuple Aim for Health Care Improvement framework, access to PHC is unevenly distributed across the population. According to the 2016 Commonwealth Fund International Health Policy Survey of Adults, lower income, immigrant status and mental health issues were consistently found to be associated with experiencing access barriers to primary care. Regarding CWLs more specifically, the introduction of guidelines and policies aiming to prioritise vulnerable populations has not prevented inequities in wait times to attachment. For example, new immigrants and those living in lower income neighbourhoods are less likely to be attached to a family physician. Moreover, while awaiting attachment, patients have to manage their unmet health needs and are left to fend for themselves without knowing how to navigate or where to obtain services near their home. Despite the potentially harmful effects on unattached patients’ health as well as possible growth in health inequities, these navigation issues remain poorly documented.

### Single points of access for unattached patients in primary care: supporting healthcare navigation and access to PHC

Currently in Québec (Canada), over 1 million patients are registered on a CWL for unattached patients (Guichets d’accès aux médecins de famille), which represents more than 12% of the Québec population. In response to unattached patients’ challenges accessing primary care services, one region in Québec developed a project called Accès Réseau Pertinence. This pilot project processed 11,500 requests for consultations, among which more than half were answered by health providers or resources other than a general practitioner. Based on the promising results observed in terms of improved use of health system resources and better adaptation to patients’ needs, the Ministry of Health and Social Services mandated all 18 health regions to establish points of access for unattached patients (Guichets d’accès première ligne (GAPs)) within their respective regions. A dedicated budget of over $37 million was allocated for the first year of implementation across the province.

Internationally, family physician shortages are a growing concern, projected to substantially worsen over the next decade. This will exacerbate issues of access to primary care providers worldwide, emphasising the need for evidence on innovations meant to address access gaps. Several jurisdictions, mostly in Canada, have implemented CWLs to facilitate attachment to a provider, but these generally do not help patients access care while they await affiliation. Outside of Québec’s GAPs, we do not know of any single points of access to support unattached patients in navigating care while awaiting affiliation with a primary care provider. GAPs offer a unique opportunity to evaluate the implementation and impacts of this innovation and provide much needed evidence to address the inequities in access to primary care faced by unattached patients.

The GAPs are being implemented in close collaboration with CWLs for unattached patients and offer services exclusively to patients on the CWLs. In Québec, since 2008, ninety-three CWLs for unattached patients have been implemented at the local health network level in the 18 administrative health regions. Unattached patients looking for a family physician can voluntarily register on a CWL or someone can complete the registration on their behalf through a provincial website. On registration, patients complete a self-administered questionnaire. This information, in combination with health administrative data on health conditions and service utilisation, is used to prioritise patients. Patients can also request a phone evaluation by a nurse to further assess their health needs. Patients are then affiliated with a family physician in their area based on proximity, priority level and physician availability.

The GAPs are intended to provide navigation and access support to CWL patients while they await attachment. Figure 1 presents the three components of the GAPs.

#### Assessment centre

Because patients can wait for years on a CWL, the GAPs’ first step is to update the patient’s health status since their registration on the CWL and to reassess their priority level. An assessment centre, operated by clinical nurses and administrative clerks, is tasked with updating the patient’s health status. Patients are assigned to one of five priority levels (A—most urgent to E—least urgent), based on a self-administered questionnaire and, as needed, a telephone consultation with a nurse, following a standardised prioritisation procedure established by Québec’s health insurance plan. This step informs the patient’s orientation with punctual need (component 2) and identifies patients eligible to access temporary services provided by an interprofessional team (component 3).
Orientation and consultation booking
The GAPs cater exclusively to the needs of patients who are registered on a CWL, orienting them to the most appropriate primary care services. As needed, patients on a CWL can contact the GAPs’ liaison service, where a nurse conducts a telephone evaluation of the urgency of patient's need for care. The patient is then either referred to a health resource in the community or given an appointment for a consultation with a family physician from dedicated time slots. Medical clinics in the province are strongly advised to allocate 20% of their time slots to appointments for unattached patients.

Temporary services delivered by an interprofessional team
The GAPs also connect CWL patients requiring more follow-up care (eg, chronic diseases, priority level) with an interprofessional PHC team that offers transitional care. This team is composed of nurses, registered nurses, pharmacists and social workers. It provides temporary care, based on clinical management algorithms and decision-making tools, that ensures access and continuity of care while patients await attachment to a family physician.

Study aims
The general objective of the study is to analyse the implementation of the GAPs and their effects on health system performance and patient experiences over time.

The specific objectives are to:
1. Analyse the implementation of the GAPs by describing GAP characteristics and identifying key factors influencing implementation.
2. Measure the effects of GAPs on key performance indicators.
3. Assess unattached patients’ experiences of navigation, access and use of health services.

Context of the study
GAPs have been implemented in all 18 regions of the province of Québec. This study will focus on the six GAPs located in the Montérégie region on the south shore of Montréal, which includes a diversity of settings (urban, semiurban and rural). Montérégie is the second most populous region of Québec, with 1.6 million inhabitants, including more than 320,000 unattached patients, of which more than two-thirds (approximately 207,000) are currently registered on the CWL. The GAP is a service available exclusively to patients registered on a CWL. This region was chosen given its demographic diversity, the advanced implementation of the GAP and prior collaborations established with regional stakeholders.

METHODS AND ANALYSIS

Study design
This study builds on a longitudinal mixed-methods case study design (figure 2). We define the cases as the six GAPs implemented in the Montérégie region. Both quantitative and qualitative data will be collected over a 2-year period.

Objective 1: analyse GAP implementation
GAP implementation will be analysed using qualitative data from key documents, observations of key meetings over the next year and retrospective in-depth individual interviews conducted since implementation began in October 2022. The different types of qualitative data collected as well as the diverse perspectives they represent will allow for the triangulation of information as well as an in-depth description and analysis of the implementation of the GAPs.

Data collection
Key documents (eg, grey literature, policies, legislation) related to the implementation of GAPs will be shared by stakeholders involved in the GAPs' roll-out. Other public documents available online will also be collected by our team through ongoing literature monitoring. With the agreement of stakeholders, we will attend online team meetings (around one to two meetings/month) to better understand the issues and successes that have arisen during the implementation of the GAPs. To this end, we will collect observational notes (recorded in an observation grid) about the process of implementation and the GAPs’ roll-out. Observations will be ongoing throughout the process, starting 12 months after the beginning of the implementation of the GAP.
Retrospective in-depth interviews will be conducted in the six GAPs implemented in the Montérégie region with key stakeholders, including health providers (e.g., family physicians and nurses), decision makers and patients. We will use purposive and snowball sampling strategies and stratify by relevant participant characteristics (i.e., role in GAP implementation, type of health provider and patient sex and age). Invitations to participate in the interviews will be sent by email. We plan to conduct approximately 40 interviews (about six to eight interviews/case) until saturation. An interview guide, developed in collaboration with research team stakeholders, will address the five core domains of the Consolidated Framework for Implementation Research (CFIR). The CFIR is a construct framework providing tools to assess barriers and facilitators to innovation implementation. The main constructs are as follows: (1) intervention characteristics, (2) outer setting, (3) inner setting, (4) roles and characteristics of the individuals involved and (5) process of implementation. The interviews will be conducted in French. They will be virtual (unless participants prefer in-person interviews), conducted via Microsoft Teams and audiotaped and transcribed. The interviews will be conducted within 2 years of beginning implementation. Patient participants will receive financial compensation for their time.

Analysis
The key documents, transcribed interviews and observation notes will be analysed using a codebook developed by our research team. The codebook will be developed iteratively based on the main constructs of the CFIR as well as the content of the interviews. NVivo software will ease content manipulation as well as exploratory descriptive analyses. Interpretation of the data will be carried out simultaneously with analysis of the qualitative data sets listed above. Discussions among the research team will allow for the identification of key issues shared by participants as well as singular experiences. The first coded documents will be discussed within the team, and interjudge reliability methods will allow for further codification to be adjusted accordingly. We will first conduct an intracase analysis by synthesising the results in tables and matrices based on the codebook for each case. The matrices will present the results by grouping codes according to the different constructs proposed in our conceptual framework and any new themes that might emerge during the analysis. From these tables and matrices, for each case studied, we will prepare a thematic network analysis identifying the relationships between different dominant themes (organising themes) and the characteristics that constitute them (basic themes) using graphic representations. We will use this analytical approach to gain a better understanding of the relationships between the different factors and the observed effects and patient experiences.
Objective 2: measure the effects of GAPs on health system performance indicators

Cross-sectional and longitudinal performance portraits of each of the six GAPs under study over a period of 24 months, retrospective from October 2021, will be constructed using a balanced scorecard approach. Although this approach was originally developed for financial contexts, it has been used and adapted widely in the healthcare sector. Indicators for the balanced scorecard were selected by an expert committee composed of policy makers, physicians, managers, patients and researchers.

Data collection
To fill the balance scorecard, health administrative data will be extracted from the electronic medical record (EMR) used by staff of the six GAPs under study. All GAPs under study use the same GAP EMR platform to standardise practices and share information. This database contains data for all patients registered on the CWL and all of their contacts with the GAP. The data (approximately 207,000 patients) used in this study will be anonymised by a member of the administrative team in the region. We will also use health administrative data collected by the Régie d’Assurance Maladie du Québec (Québec’s publicly funded health and drug insurance plan) to document the proportion of the general population attached to a family physician by territory as contextual information relevant to our study. To date, 11 performance indicators have been decided on by the indicator committee. These indicators are measured by financial period. Figure 3 presents these indicators and their calculation methods.

Analysis
The indicators will be measured by GAP and analysed by financial period (13 periods) and compared between periods, between GAPs and according to different patient profiles. SPSS 27 software will be used to perform descriptive statistics (central and dispersion trends) for

Figure 3 Guichets d'accès première ligne (GAP) indicators.
all indicators as well as a time series analysis to identify differences in indicators.

Objective 3: assess unattached patients’ experiences of navigation, access and use of health services

Patient experiences will be assessed using a self-administered electronic questionnaire developed from validated data collection instruments on the primary care experiences of patients25–27 51–61 as well as questions developed by our research team 62 (about the experience of being on a CWL). Survey development and pretesting will include a feedback discussion with five to eight patients after completion of the survey.63 Following cognitive testing techniques, interviews will be conducted to identify items that are not clear or need to be reformulated.64

Data collection

The survey will consist of approximately 55 questions and will take about 15 min to complete. The survey will be available in French and English. The survey will cover the following topics: (1) navigation experience with healthcare services, (2) healthcare service utilisation and consequences of lack of access (on health status and perceptions about the health system), (3) experience of services received from the GAP and (4) sociodemographic and clinical profiles (figure 4). We will also ask respondents for their health insurance number, which will enable linking to data on their utilisation of GAP services for those who agree to share.

The survey will be distributed electronically to all patients for whom an email address is available in the EMR. There are currently 165,600 eligible patients in the six Montérégie GAPs,28 of which approximately 80% have an email address in the system. This data collection strategy is inexpensive and includes friendly reminders on days 7 and 14.65 Analyses of the characteristics of patients who do not have email addresses will be performed to fully understand the influence of this bias on the representativeness of the study population. Assuming a participation rate of 10%, we anticipate that 16,500 patients will complete the self-administered survey.

Analysis

Descriptive and inferential statistical analysis will be conducted using SPSS 27 software. We will first use univariate statistics (n, %, mean, median, SD) to describe the population of unattached patients registered on the CWL and their experiences with GAP services received. Then, bivariate and multivariate analyses of patients’ experiences will be conducted using regression models. Stratified analysis, by patients’ clinical and sociodemographic profiles, will allow for the identification of potential inequalities in primary care health service access. Analyses will be conducted with the complete sample of respondents first, and second stratified by GAP.

Integration of qualitative and quantitative data

In this study, data integration will take place during the interpretation phase. Data integration is a necessary stage of mixed-methods research.66 Yet, it remains poorly documented and difficult to operationalise. Visual structures, joint displays, for the integration and interpretation of mixed data are increasingly used to overcome these limitations.67 Joint display analysis is defined as ‘an iterative process of developing successive visual presentations of related aspects of the quantitative and qualitative findings to find the most optimal visual representation for conveying the integrated results’.58

The visual presentation of the integrated results will allow for the identification of specific issues in access to primary care for unattached patients. First, side-by-side displays will compare the implementation and effects of the six GAPs according to the domains and constructs of the CFIR framework (qualitative data), balanced scorecards for each GAP (quantitative data) and patients’ experiences (quantitative data). Second, a statistics-by-themes
joint display will be used to illustrate differences in the health and sociodemographic profiles of GAP service users.

We will use these materials to perform a cross-sectional intercase analysis. We will analyse the similarities and differences among the six case studies, as illustrated by the thematic network analysis, and will extract the key lessons. These analytical tools will help us develop sets of recommendations regarding GAP models that perform well and less well (in relation to outcomes), their key components and the environmental factors that facilitate or impede their implementation. These findings will then be used to prepare a synthesis report on the key lessons that can facilitate future implementation of GAPs in different organisational contexts.

**Patient and public involvement**

Our research team will rely on the collaboration of patient partners who will share their experience in navigating and using health services and will contribute to the development of data collection instruments (ie, patient survey) and the dissemination of study results.

**DISCUSSION AND CONCLUSION**

The issue of access for unattached patients is a major challenge for many health systems around the world. Most Canadian provinces have implemented CWLs to facilitate the attachment of patients to a family physician. However, few studies have evaluated CWLs for unattached patients.20 22 69 Single points of access for unattached patients are a promising innovation to support navigation and access to primary care services for unattached patients, but they have not been evaluated to date.

The GAP innovation is a key element of the transformation of the organisation and delivery of primary care services in Québec.32 This study will make an important contribution to the understanding of key components involved in transforming access by generating knowledge from various perspectives about the factors that facilitate or hinder GAP implementation as well as improve health service delivery and patient outcomes. Given the projected shortage of family doctors, our findings have the potential to contribute to better allocation of primary care resources in countries with similar workforce issues.

The implementation of this innovation in several settings at the same time offers a unique study opportunity to identify promising strategies to improve implementation and identify learnings for health systems interested in this type of innovation. Our findings will help identify facilitators of and barriers to the implementation of single points of access. They will also inform the development and implementation of similar organisational innovations in other countries.

More importantly, this study’s findings will document unattached patients’ navigational challenges, an issue increasingly identified as a priority but currently poorly documented. The originality of this study lies in its focus on the evaluation of the implementation of GAPs as well as on the evaluation of the experiences of patients (patient-reported experience measures). This study will provide original data sets from complementary data sources, both quantitative and qualitative, on the experiences of unattached patients, thereby contributing to closing the gap in data availability in this area. Finally, investigating unattached patients’ navigational and access challenges through the lens of the patient perspective will help identify issues of access to primary care services relevant to a vulnerable population. Documenting these issues is necessary, especially in light of the Quintuple Aim’s latest dimension, health equity.23

**ETHICS AND DISSEMINATION**

This study has received ethical approval from the regional health organisation with which the principal investigator is affiliated (MP-04-2023-716). This study is expected to take place over 2 years. Ethics and consent for participation will be sought at each phase of the study when needed. Consent to participate in an interview or to complete an electronic survey will be obtained, and data will be anonymised.

Sharing study findings and developing recommendations will be critical to transforming the knowledge gained into plans and interventions38 to support access and navigation of PHC for unattached patients in the future. We will share balanced scorecard performance dashboards in real time with stakeholders from the six GAPs. Barriers, facilitators and promising strategies will be summarised and shared in a timely manner with stakeholders across Québec to foster cross-fertilisation between GAPs and support implementation. Early findings will be presented at regular stakeholder meetings and shared with the Ministry of Health and Social Services.

**Author affiliations**

1Department of community health sciences, Université de Sherbrooke–Campus de Longueuil, Longueuil, Québec, Canada
2Department of social and preventive medicine, Université Laval, Québec, Québec, Canada
3Centre de recherche du CHU de Québec-Université Laval, Québec, Québec, Canada
4Direction de l’accès aux services médicaux de première ligne pour la Montérégie, Centre intégré de santé et de services sociaux de la Montérégie-Centre du Québec, Greenfield Park, Québec, Canada
5Department of Family Medicine and Emergency Medicine, Université de Montréal École de Santé Publique, Montréal, Québec, Canada
6Department of Management, Evaluation and Health Policy, Université de Montréal École de Santé Publique, Montréal, Québec, Canada
7Department of Family Medicine and Emergency Medicine, Université de Montréal, Montréal, Québec, Canada
8Department of community health sciences, Université de Sherbrooke, Sherbrooke, Québec, Canada

**Twitter** Mylaine Breton @bretonmylaine, Maude Laberge @MaudeLaberge and Sabina Abou Malham @sabmalham

**Acknowledgements** The authors thank Lisa Starr for scientific and linguistic editing.

**Contributors** MB, CL-L, JA and ML led the conceptualisation and design of the study, but all authors were involved. MB, CL-L and VD will lead the coordination of

the study. MB, CL-L, LD, JA and ML wrote the first draft, and all authors (MB, CL-L, LD, JA, IG, MB, M-PP, AM, AT, AS-Y, MAS, ND-S, CS, SAM) critically reviewed it and provided comments to revise and improve it. All authors (MB, CL-L, LD, JA, IG, MB, M-PP, AM, AT, AS-Y, MAS, ND-S, CS, SAM) read and approved the final version.

**Funding** This study was peer reviewed and funded by a Canadian Institutes of Health Research Catalyst Grant (475314) and the Fonds de Soutien à l’innovation en santé et services sociaux (5-2-01).

**Competing interests** None declared.

**Patient and public involvement** Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

**Patient consent for publication** Obtained.

**Provenance and peer review** Not commissioned; peer reviewed for ethical and funding approval prior to submission.

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

**ORCID iDs**

Mylaine Breton http://orcid.org/0000-0001-8052-942X

Aude Motulsky http://orcid.org/0000-0001-8052-942X

Sabina Abou Malham http://orcid.org/0000-0003-2885-6807

**REFERENCES**


16 Sammarit C, Ross N. Experiencing difficulties accessing first-contact health services in canada: canadians without regular doctors and recent immigrants have difficulties accessing first-contact healthcare services, reports of difficulties in accessing care vary by age, sex and region. *Healthcare Policy* 2024;1:103–19.


31 Bas-Saint-Laurent Cidessedd. Convocation – consultations particulières et auditions publiques sur le projet de loi n° 11, loi visant à augmenter l’offre de services de première ligne par les médecins omnipraticiens et à améliorer la gestion de cette offre consultations particulières et auditions publiques sur le projet de loi n° 11. 2022.


33 Cousoineau M-E. 37,7 millions pour les guichets d’accès à la première ligne. Le Devoir 2022.


McDonald B. A review of the use of the balanced scorecard in healthcare. BMDC Consult 2012;2012:1–32.


Steinr DL, Norman GR, Cairney J. Health measurement scales: a practical guide to their development and use. USA: Oxford University Press, 2015.


