



**Savoir Montfort**



uOttawa

Faculté de médecine  
Département de médecine familiale

Faculty of Medicine  
Department of Family Medicine



Fondation **Montfort** Foundation

The University of Ottawa and Institut du Savoir Montfort

Chair in Family Medicine

## Midterm Report

Years 2 & 3

(Jan. 1st, 2022-Dec. 31st, 2023)

by

Dr. Lise M. Bjerre, MDCM, PhD, CCFP

Chair in family medicine

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## EXECUTIVE SUMMARY

The University of Ottawa and Institut du Savoir Montfort Chair in Family Medicine is midway through its inaugural 5-year tenure. The overall goal of the Chair is **to carry out high-impact, high-quality primary care research that makes a difference to the lives of Canadians, particularly those living in underserved or vulnerable situations, including Francophone linguistic minority populations**. The current report focuses on the 2nd and 3rd years of the Chair's tenure (Jan. 1st 2022 to Dec. 31st 2023). The focus over the past 2 years has been on continued funding acquisition, project completion and knowledge dissemination. Networking and establishing strong collaborations with researchers, community organizations and patient partners continue to be an integral part of the Chair's ongoing work and mandate.

It has been a prosperous period for the Chair since the last report, with \$347,200 in additional funding obtained since January 2022. Including over \$230,000 in active funding that was either brought into the Chair or obtained by the chair in 2021, there was a total of \$582,344 in active funding as of December 2023. The Chair has also co-authored ten peer-reviewed journal publications, one pre-print article and one online tool in the past 2 years, including four as lead or senior author and currently has multiple first or senior author manuscripts submitted and awaiting journal reviewer decision.

The Chair's Research has been consolidated into four main themes: **Access to care** (including virtual care), **Medication Appropriateness, Impact of language on care (Linguistic Factors)** and **Novel tools and methods for primary care and population health research and evaluation**. This is a separate category of multi-method research capacity that has been built to provide the best answers to the most important questions. These include the use of AI in large population health data repositories, and geospatial mapping analytics to support access to care and the development of patient- and population-facing tools. Several of our team's projects intersect across our four main themes, combining analyses of access with examination of the impact of language and distance, and using novel approaches to achieve our project goals. Flagship projects that are under way in these areas include: two CIHR-funded projects, the **Northern Ontario Project** (geospatial analysis of access to care by French-speaking patients in Northern Ontario), the **CLOSM data project** (creation of a pan-Canadian directory and meta-data repository of linguistic variables in population health databases) and the multi funder **Statins Deprescribing Guideline**. Other projects the **Linguistic factors and inappropriate prescribing of antipsychotics** study, and **"Getting ahead of the curve", an AI and machine learning predictive modeling study**.

The team has also grown significantly, with the additions of two post-doctoral fellows and multiple student researchers in 2022. The team then continued to further expand in 2023, with one of our post-doctoral fellows transitioning to an associate member role with the team. We also hired two additional research coordinators and a research assistant to better support the Chair's growing program of research. Furthermore, early-career clinician investigators have been attracted to the team, which provides them with operational support and an intellectual home from which to launch their own research programs. Currently, the team has 10 active members, including Dr. Bjerre. Details about the team and our program of research can be found on our soon-to-be launched website at: [www.hail-lais.ca](http://www.hail-lais.ca)

Goals for the year 2024 ahead include continued growth of the team, a sharp focus on knowledge dissemination and publication, and the acquisition of programmatic funding. Long-term goals of the Chair include the establishment of a solid foundation for perennity in the form of multi-year funding acquisition, streamlining of operational processes to better support investigators' work, and team growth to expand the reach and impact of our work across Canada and beyond. Finally, the successes and milestones achieved by the Chair would not have been possible without the great team and the collaborative environment established by Dr. Bjerre since the beginning of her Chair. The Institut du Savoir Montfort, the Fondation Montfort, and the University of Ottawa Department of Family Medicine – three major funders of the Chair – have been integral to the Chair's successes to date. In the year ahead and with their ongoing support, our team will continue to lead primary care research by continuing to create and share knowledge that is grounded in scientific methods and provides evidence-based answers to questions that matter, thereby consolidating our role as center of primary health care research excellence in Canada and beyond.

Respectfully submitted,



Dr. Lise M. Bjerre, MDCM, PhD, CCFP

University of Ottawa and Institut du Savoir Montfort Chair in family medicine

## INTRODUCTION

### The uOttawa and Institut du Savoir Montfort Chair in Family Medicine

The University of Ottawa and Institut du Savoir Montfort Chair in family medicine is an endowed research chair whose activities started in January 2021. The major funders of the Chair are the University of Ottawa Department of Family Medicine, the Fondation Montfort, and the Institut du Savoir Montfort. The inaugural chairholder is Dr. Lise M. Bjerre, family physician and epidemiologist. The Chair provides funding for 4 days per week of research and related activities. In the remaining time, Dr. Bjerre practices comprehensive family medicine in a community-based family medicine practice (1 day/week, plus after-hours and weekend care).

As stated in the terms of reference, the overarching goal, and therefore, the mission of the Chair is as follows:

#### Mission – The Purpose of the Chair

*“The overall objective of the Chair is to increase primary health care research that improves healthy living and health of the community in Canada and beyond, including Francophone communities living in a minority context” (from the Terms of Reference of the Chair).<sup>1</sup>*

More specifically (from the Terms of reference of the Chair):

*The Chair will play a pivotal role in building Primary Health Care research capacity within the ISM by conducting rigorous, relevant, and innovative health services research that drives knowledge to action in the area of healthy living and health of the community with a focus on vulnerable and Francophone communities living in a minority context. The presence of the Chair will attract high-caliber investigators, fellows, postdoctoral and graduate students to the Institut du Savoir Montfort and will help foster its strategic vision and positioning as a leader and as a center of research excellence in Canada and abroad in primary health care.*

*The Chair research activities will contribute to the enhanced quality of life of patients through discipline-specific and inter-disciplinary collaborative research specifically related to primary health care in areas that align with and build upon mandates of Institut du Savoir Montfort and the Department of Family Medicine.*

*The Chair’s planned scope of research will encompass:*

- 1. Health promotion and disease prevention*
- 2. Improved primary health care service delivery, especially for patients with multiple chronic diseases (body and mind)*
- 3. Evaluation of health outcomes within the context of a life cycle*
- 4. Improving the health of our patients and their families and our communities*

#### Vision – What the Chair Endeavours to Achieve and Establish

The vision of the Chair is to establish the *University of Ottawa and Institut du Savoir Montfort Chair in family medicine* as an internationally recognized **leader and expert in primary care research, evaluation and improvement**, with a particular focus on the following themes: **Access to care**, including virtual care, particularly for vulnerable populations including linguistic minorities, rural, remote, and underserved populations; **medication appropriateness in primary care**; **impact of linguistic factors** on care quality and patient outcomes; and **using innovative tools and methods, including AI and geospatial mapping techniques** to improve primary care practice and research. This has so far been achieved by developing a program of research characterized by strong mentorship and collaboration, community and patient engagement, interdisciplinary cooperation, and patient- and provider-relevant outputs.

#### Expectations of the Chair

The Chair is expected to fulfill the following expectations (excerpt from the Terms of reference of the Chair):

*The Chair's scope of research will align with DFM's and ISM's strategic plan. The Chair will provide leadership in the field of improved Community Care and will:*

- 1. Promote new collaborative research opportunities and knowledge transfer*
- 2. Influence greater collaboration with a cadre of researchers from the disciplines of primary care health services to determine research initiatives*
- 3. Provide an environment that promotes and facilitates interdisciplinary collaborative research*
- 4. Promote discipline-specific and inter-disciplinary collaborative research on the processes of community-based health care delivery*
- 5. Support practitioners, researchers, decision maker and students in contributing to enhancing primary health care, including a focus on vulnerable populations and Francophone communities living in a minority context*
- 6. Collaborate with university faculty, community-based organizations, policy and decision makers, national and international institutes to stimulate teaching and health services-oriented research*
- 7. Increase dissemination of information through publication on issues related to community health services and health service delivery*
- 8. Recognize and acknowledge the major funders in all publications, oral presentations and other such work*
- 9. Provide support mechanisms for healthy living and primary care health delivery to other institutions, community agencies, health care professionals, informal caregivers and health care consumers*
- 10. Enhance specialized knowledge and skills required to conduct relevant research*
- 11. Act as a mentor to support junior researcher in establishing their research program*
- 12. Supervise graduate students, postdoctoral fellows and trainees (Hereinafter "HQP")*
- 13. Gain recognition through peer-reviewed publications, presentations and external grant funding acquisition*
- 14. Position the University, the DFM and the ISM as an international leader in primary health care research.*
- 15. The Chair holder must also provide comprehensive clinical care in a Family practice.*

#### Annual Chair Review

As specified in the Terms of Reference of the Chair, the performance of the Chair is to be reviewed on an annual basis, as follows:

*The Chair's performance will be reviewed annually by a Review Committee. The Chair will prepare and deliver a written annual report to the members of the Review Committee summarizing the year's activities, including:*

- Description of activities to demonstrate level of productivity (to be evaluated based on peer-reviewed publications and peer-reviewed grant-funded projects)*
- Scope of research underway*
- Criteria established in section 3 (Expectations -- see above)*
- Detailed work plan for the year ahead*

The present report was prepared in partial fulfillment of these requirements; highlights of the report will be presented at the Chair Review Committee meeting on January 25th, 2024.

#### ACTIVITIES OF THE CHAIR (Jan. 1st 2022 to Dec. 31st 2023)

##### Funding Acquisition

##### Funding Obtained and Active Grants

During the years 2 and 3 of the tenure of the Chair (calendar years 2022 and 2023, respectively), the following funding was acquired/brought into the Chair as active grants, **for a total of \$582,344** (including \$195,244 in existing funding from ongoing grants brought into the Chair, \$39,900 from ongoing grants obtained in 2021, \$164,200 in new funding acquired in 2022, and \$183,000 in new funding acquired in 2023):

**Table 1.** Chair research funding in 2022-2023

Operating Grants	Name	Amount awarded	Notes
INSPIRE-PHC AHRQ	Primary Care and French-Language Minorities: Exploring regional access and inequities in language-concordant primary care for French speakers	\$25,000	New funding obtained in 2023
CIHR – Project Grant: Health and Official Languages in Minority Communities	Analyse géocartographique de l'accès aux soins de santé pour les communautés de langue officielle en situation minoritaire (CLOSM) dans les régions rurales et éloignées de l'Ontario : l'impact de l'offre de médecins sur la concordance linguistique des soins et le fardeau de déplacement pour les patients	\$100,000	New funding obtained in 2023
INSPIRE-PHC AHRQ	Renfrew County Impact of Unattachment Study	\$40,000	New funding obtained in 2023; Lead: Dr. Jonathan Fitzsimon Senior author and ICES scientist: Dr. Lise Bjerre
<a href="#">Ontario Graduate Scholarship</a>	<a href="#">Prince Edward Island – Access to care and patient outcomes</a>	<a href="#">\$8,750</a>	<a href="#">New funding obtained in 2023 (In kind funding to support a master's student)</a>
<a href="#">ISM – Graduate Student Bursary</a>	<a href="#">Prince Edward Island – Access to care and patient outcomes</a>	<a href="#">\$5,000</a>	<a href="#">New funding obtained in 2023; (In kind funding to support a master's student)</a>
ISM – Fondation Montfort - DFM	Research Chair	\$18,000	Funding obtained in 2023 (Unrestricted funds)
CIHR – Catalyst Grant: Official Language Minority Communities in Health Research	A research community to improve health services for Francophone minority communities in Canada	\$100,000	New funding obtained in 2022
Bureau des affaires francophones de l'Université d'Ottawa	Geospatial mapping - Alberta	\$9,500	New funding obtained in 2022
SPOR-Francophone Work Group (OSSU- IF-COFFRE)	Patient and provider satisfaction with the interactive family physician map 'Docmapper.ca'	\$7,500	New funding obtained in 2022

INSPIRE-PHC AHRQ	Evaluating Integrated Virtual Care (IVC): Increasing the rates of attachment to a family physician in a rural setting	\$24,200	New funding obtained in 2022; Lead: Dr. Jonathan Fitzsimon Senior author and ICES scientist: Dr. Lise Bjerre
uOttawa DFM	ECT Wait Times Scoping Review	\$5,000	New funding obtained in 2022 (In kind)
<a href="#">UROP</a>	<a href="https://docmapper.ca/Trouvezmedicin.ca">Docmapper.ca/Trouvezmedicin.ca</a> <a href="#">User Satisfaction Evaluation</a>	<a href="#">\$1,000</a>	<a href="#">New funding obtained in 2022 (In kind)</a>
ISM – Fondation Montfort– DFM	Research Chair	\$18,000	Funding obtained in 2022 (Unrestricted funds)
CFNS - uOttawa	CNFS Antipsychotics in long-term care (LTC)	\$39,900	Active grant, obtained in 2021
TOHAMO – OHRI	Statins Deprescribing Guideline	\$98,400	Active grant, brought into Chair
TOHAMO – OHRI	COVID AI project (“Getting ahead of the curve”)	\$99,844	Active grant, brought into Chair
<b>Total</b>		<b>\$600,094</b>	

#### Operation Funding During Chair Tenure

Total operational funding to date during Chair tenure (inclusive of active and completed project funding):

Initially Brought into Chair	\$238,244
2021 Funding	\$209,275
2022 Funding	\$165,200
2023 Funding	\$196,750
<b>Total</b>	<b>\$809,469</b>

#### Funding Applications Submitted

The following funding applications were prepared and submitted in the years 2022 and 2023:

##### 2022:

- CIHR Catalyst Grant: A Research Community to Improve Health Services for Francophone Minority Communities in Canada (*Une communauté de recherche pour améliorer les services de santé pour les communautés francophones en situation minoritaire au Canada*) – **Funded (\$100,000)**
- University of Ottawa Faculty of Medicine Summer Studentship: 1 Summer Student – **Funded (\$5,000)**
  - Kevin Min. “*The Impact of Electroconvulsive Therapy (ECT) Wait Times Prior to and During the COVID-19 Pandemic on Patients with Mental Health Disorders: A Scoping Review.*”
- University of Ottawa Undergraduate Research Opportunities Program (UROP): [Docmapper.ca/Trouvezmedicin.ca](https://docmapper.ca/Trouvezmedicin.ca) user satisfaction evaluation – **Funded (\$1,000)**

- Sara Francoeur. “Patient and provider satisfaction with a geomapping tool for finding community family physicians: A cross-sectional survey study in Ontario, Canada”
- AMS Fellowship in AI and compassionate care (Applicant: Dr. Chris Belanger) \$75,000 – **Unfunded** (successful at 1st stage selection, not awarded at 2nd stage)
- PSI Foundation: ECT wait times clinical and economic evaluation. \$151,144 – **Unfunded**
- CIHR grant competition (Spring 2022): COVID-19 and potentially inappropriate prescribing (PIP) . \$270,000 – **Unfunded**
- CIHR grant competition (Spring 2022): Canadian Medication Guide. \$430,000 – **Unfunded**
- CNFS Nationale: Docmapper.ca Tool Expansion (*Cartographie de l'accès à des soins primaires conformes à la langue pour les populations francophones et autres minorités linguistiques - expansion de l'outil trouvezunmedecin.ca et docmapper.ca*). \$50,000 – **Unfunded**

#### 2023:

- INSPIRE-PHC AHRQ: Primary Care and French-Language Minorities: Exploring Regional Access and Inequities in Language-Concordant Primary Care for French Speakers – **Funded (\$25,000)**
- CIHR grant competition (Spring 2023): Geospatial mapping analysis of access to health care for official language minority communities (OLMC) in rural and remote regions of Ontario (*Analyse géocartographique de l'accès aux soins de santé pour les communautés de langue officielle en situation minoritaire (CLOSM) dans les régions rurales et éloignées de l'Ontario : l'impact de l'offre de médecins sur la concordance linguistique des soins et le fardeau de déplacement pour les patients*). \$290,000. – **Funded (\$100,000)**
- INSPIRE-PHC AHRQ: Renfrew County impact of unattachment. – **Funded (\$40,000)**
- CMA Healthcare Unburdened grant: Icanbewell/Choixante: The Innovative digital App to reimagine resourcing for primary care and unattached patients. \$919,900 – **Decision Pending**
- CIHR grant competition (Fall 2023): Distance, travel burden, language concordance and equity: assessing and improving access to care for rural, remote, vulnerable and underserved populations, including linguistic minorities, in Canada. - \$595,000 – **Decision Pending**
- CNFS University of Ottawa (Emerging projects): Docmapper.ca Tool Expansion (*Cartographie de l'accès à des soins primaires conformes à la langue pour les populations francophones et autres minorités linguistiques - expansion de l'outil trouvezunmedecin.ca et docmapper.ca*). \$18,000 – **Unfunded**
- Savoir Montfort: Docmapper.ca Tool Expansion (*Cartographie de l'accès à des soins primaires conformes à la langue pour les populations francophones et autres minorités linguistiques - expansion de l'outil trouvezunmedecin.ca et docmapper.ca*). \$40,000 – **Unfunded**

## PROJECT EXECUTION

### Research Themes and Ongoing Projects

The various projects of the Chair’s program of research fall broadly into one of four categories: **Access to care** (including virtual care), **medication appropriateness**, impact of **linguistic factors** on care quality and patient outcomes, and **innovative tools** for population health and primary care research (including utilizing **AI in population health databases** and **geospatial mapping techniques**).

The active projects in 2022 and 2023 falling under each of the themes/categories are as follows:

**Table 2. Chair program of research – Themes and Active Projects**



Access to Care	<ul style="list-style-type: none"> <li>❖ Ottawa Access to Care and Travel Burden by Language (overlapping themes)</li> <li>❖ Docmapper.ca/Trouvezmedicin.ca User Satisfaction Evaluation (overlapping themes)</li> <li>❖ Assessing the Clinical and Economic Impact of the Virtual Triage and Assessment Centre (VTAC) in a Canadian Rural Setting (lead: Dr. J. Fitzsimon)</li> <li>❖ Renfrew County Virtual Triage and Assessment Centre (VTAC): Physician Experiences (lead: Dr. J. Fitzsimon)</li> <li>❖ Renfrew County Virtual Triage and Assessment Centre (VTAC): Patient Experiences (lead: Dr. J. Fitzsimon)</li> <li>❖ Patient Experiences with Renfrew County Integrated Virtual Care (IVC) (lead: Dr. J. Fitzsimon)</li> <li>❖ Patient and Provider Experiences with Renfrew County Integrated Virtual Care (IVC): Phase 2 Evaluation (lead: Dr. J. Fitzsimon)</li> <li>❖ Evaluating the Impact of Unattachment Duration in Ontario (lead: Dr. J. Fitzsimon)</li> <li>❖ Prince Edward Island – Access to Care and Patient Outcomes</li> <li>❖ ECT Wait Time Scoping Review</li> </ul>
Medication Appropriateness	<ul style="list-style-type: none"> <li>❖ Statins Deprescribing Guideline</li> <li>❖ Inappropriate Prescribing of Antipsychotics and Linguistic Factors (overlapping themes)</li> </ul>
Linguistic Factors	<ul style="list-style-type: none"> <li>❖ Ottawa Access to Care and Travel Burden by Language (overlapping themes)</li> <li>❖ Inappropriate Prescribing of Antipsychotics and Linguistic Factors (overlapping themes)</li> <li>❖ A Research Community to Improve Health Services for Francophone Minority Communities in Canada</li> <li>❖ Geospatial Mapping Analysis of Access to Health Care for Official Language Minority Communities (OLMC) in Rural and Remote Regions of Ontario</li> <li>❖ Primary Care and French-Language Minorities: Exploring Regional Access and Inequities in Language-concordant Primary Care for French Speakers</li> </ul>
Innovative Tools and Methods	<ul style="list-style-type: none"> <li>❖ Getting Ahead of the Curve (COVID-19) - AI in Population Health Data</li> <li>❖ Ottawa Access to Care and Travel Burden by Language (overlapping themes)</li> <li>❖ Docmapper.ca/Trouvezmedicin.ca User Satisfaction Evaluation (overlapping themes)</li> </ul>

The following provides a brief description of each project. Some projects may fit under two or more themes, but are described below under only one theme.

### Access to Care Theme

#### *Ottawa Access to Care and Travel Burden by Language*

While language concordance between patients and primary care physicians results in better quality of care and health outcomes for patients, little research has been done to measure inequities in travel burden to primary care physicians for linguistic minorities in Canada. This study, conducted in collaboration with members of the Ottawa Neighbourhood Study, measured travel burden for all residents in Ottawa, Ontario to primary care physicians (family physicians in community practice), and compared it to the travel burden for French-only speakers to language-concordant primary care. Our results indicate that there are neighbourhood-level travel burden inequities for official language minorities in Ottawa, ON. These inequities are generally smaller, however, in neighbourhoods with a larger proportion of French-only speakers. Our methods use open-sourced data and algorithms and can be replicated for other geographical regions in Canada. A manuscript was published in CMAJ Open in 2023 ([DOI: 10.9778/cmajo.20220061](https://doi.org/10.9778/cmajo.20220061)).

Overlapping themes – Linguistic Factors and Innovative Tools and Methods

#### *Docmapper.ca/Trouvezmedicin.ca*

We have created Docmapper, a bilingual, free, open-source, interactive map and search tool covering Ottawa, Renfrew County, and Alberta. Funds have recently been secured that will enable expansion to all of Ontario. This tool allows users to easily locate family physicians who can communicate in their language of choice (includes all languages spoken by physicians in a given geographical area). Over 7,500 unique visitors have accessed the tool since its inception in September 2023, and

as of January 2024 the tool averages over 100 unique users per week. Docmapper is publicly available at: [docmapper.ca](http://docmapper.ca) and [trouvezunmedecin.ca](http://trouvezunmedecin.ca), and does not require users to create an account or give any personal information.

Funder: SPOR-Francophone work group (OSSU- IF-COFFRE) (\$9,375). In December 2023, our team secured funding to expand Docmapper to the entire province of Ontario. We expect this expanded version of Docmapper will be available in the latter half of 2024.

#### *Docmapper.ca/Trouvezmedecin.ca User Satisfaction Evaluation*

We recently conducted a mixed-methods quality improvement study of user satisfaction with the Docmapper tool. The results of this study will be used to improve the map's effectiveness in helping patients find language-concordant primary care. A manuscript for this study has been submitted for publication in a peer-review journal and is awaiting peer review. Funder: University of Ottawa Undergraduate Research Opportunity Program (UROP) (\$1,000) and SPOR-Francophone work group (OSSU- IF-COFFRE) (\$7,500)

Overlapping themes - Innovative Tools and Methods

#### *Prince Edward Island – Access to Care and Patient Outcomes*

This retrospective, population-based, cross-sectional study of data from the National Ambulatory Care Reporting System (NACRS) database will examine whether lack of access to primary care providers on Prince Edward Island (PEI) is associated with ED visit acuity, and examine which clinical and sociodemographic factors, such as region of residence on PEI, modify this association. This project is being conducted for a Master's thesis project (M.Sc. Epidemiology).

Funders: ISM – Graduate Student Bursary (\$5,000) and Ontario Graduate Scholarship (\$8,750), in kind funding to support a master's student

#### *ECT Wait Time Scoping Review*

The purpose of this project was to conduct a scoping review on the clinical and economic impacts of current wait times for ECT among depressed and catatonic patients, and the impact of service disruptions caused by the COVID-19 pandemic. This helped lay the groundwork for a funding application to conduct a study using Ontario's population health databases. Funder: DFM/Faculty of Medicine support for a summer student (\$5,000).

#### *Access to Care in Renfrew County Projects (Lead: Dr. Jonathan Fitzsimon)*

##### *Assessing the Clinical and Economic Impact of the Virtual Triage and Assessment Centre (VTAC) in a Canadian Rural Setting*

This cross-sectional comparative study aimed to evaluate the clinical and economic impact of VTAC in Renfrew County, based on health-administrative data from ICES, Ontario's population health data steward. Study data was analyzed to compare pre-pandemic and intra-pandemic use of emergency departments, family physician services, and hospital admissions in Renfrew County, and compared to neighbouring rural jurisdictions. This study found that after implementing VTAC, Renfrew County saw reduced ED visits and hospitalisations and slower health-system costs growth compared with neighbouring rural jurisdictions without a model of care similar to VTAC. A manuscript for this study was published in BMJ Open in 2023 ([DOI: 10.1136/bmjopen-2022-069699](https://doi.org/10.1136/bmjopen-2022-069699)).

Funder: Various Renfrew County health care provider organizations, ICES/AHRQ and DFM (see Funding section, Table 2, for details) (\$137,000).

##### *Renfrew County Virtual Triage and Assessment Centre (VTAC): Physician Experiences*

This mixed-methods study assessed the experiences of healthcare providers in delivering care through Renfrew County VTAC. We administered physician questionnaires (n=17) and conducted focus group interviews (n=9). Qualitative data was analyzed using thematic analysis. This study found that VTAC was associated with positive physician experiences, driven by skills development, patient gratitude, and clinical impact (e.g. helping to reduce ED visits), and identified areas of improvement, such as greater support for complex patients. A manuscript for this study was published in BMC Health Services Research 2023 (DOI: 10.1186/s12913-023-09599-x).

Funder: DFM/Faculty of Medicine support for a summer student (\$5,000).

##### *Renfrew County Virtual Triage and Assessment Centre (VTAC): Patient Experiences*

This mixed-method qualitative study aims to investigate the patient experience of receiving care through VTAC. We delivered an online survey to n=397 residents and are currently in the process of conducting semi-structured interviews

with VTAC patients for data collection. The survey data were analyzed using descriptive statistics and multivariate logistic regressions. The semi-structured interviews will be coded and analyzed using thematic analysis. Results from this study will be used to improve the delivery of care in Renfrew County through VTAC. This study is expected to be completed by Spring 2024.

Funder: DFM/Faculty of Medicine support for a summer student (\$5,000).

#### *Patient Experiences with Renfrew County Integrated Virtual Care (IVC)*

This cross-sectional study evaluated patient experiences with receiving primary care services through Renfrew County's Integrated Virtual Care (IVC). Using an anonymous, online survey administered to IVC patients (n = 121), we found that 90% of respondents were very satisfied or satisfied with care from their IVC family physician, and when comparing previous health care experiences, 75% reported that their encounters with IVC were better than or the same as any prior, in-person health care encounters. These results highlight IVC's initial success in providing satisfactory primary care in Renfrew County, and will be used to improve care delivery through IVC as it expands to take on more patients. A manuscript for this study was published in *Annals of Family Medicine* in 2023 ([DOI: 10.1370/afm.2978](https://doi.org/10.1370/afm.2978)).

Funder: DFM/Faculty of Medicine support for a summer student (\$5,000).

#### *Patient and Provider Experiences with Renfrew County Integrated Virtual Care (IVC): Phase 2 Evaluation*

Building on the previous evaluations of the program, this series of ongoing projects involves two studies aiming to comprehensively assess the experiences of both healthcare providers and patients involved with Renfrew County IVC.

1) The first study explores patient experiences with the IVC program, utilizing an online, cross-sectional survey to collect data on various domains, including access, virtual care, patient-centeredness, and overall satisfaction. To date, we collected and analyzed 203 responses, and are currently in the process of preparing the manuscript for this study.

2) The second study aims to qualitatively explore the experiences of physicians, allied health professionals, and administrators working with IVC. Overall, we have conducted 16 one-on-one semi-structured interviews with family physicians (n=3), allied health professionals (n=7) and administrators (n=6) to evaluate their experiences with the IVC program. This study is currently in the data analysis phase.

#### *Evaluating the Impact of Unattachment Duration in Ontario*

This study's main goal was to explore the intricate relationship between attachment status, duration of unattachment, demographic factors, and patient health characteristics in Ontario, in relation to healthcare utilization (emergency room visits and hospitalizations) and costs. We found that both unattachment and its duration are associated with negative health outcomes, particularly in the context of comorbidities, both within Ontario in the catchment area of the predominantly rural Ottawa Valley Ontario Health Team. This study is currently in the final stages of manuscript writing. Looking ahead, we intend to build on this work by investigating the impact of unattachment duration on healthcare utilization at a more granular level, such as the length of hospital stay, frequency, and severity of healthcare encounters. Additionally, we plan to examine the relationship between unattachment and disease severity and mortality.

Funder: INSPIRE-PHC AHRQ (\$40,000)

## Medication Appropriateness Theme

#### *Statins Deprescribing Guideline*

Using the validated approach of the OPEN deprescribing initiative ([deprescribing.org](https://deprescribing.org)) and building on Dr. Bjerre's experience as lead of the Antipsychotics Deprescribing Guideline (Canadian Family Physician, 2018; and [deprescribing.org](https://deprescribing.org)), this project focuses on the development of a clinical deprescribing guideline for statins (cholesterol lowering agents), the most frequently prescribed class of medication in Canada. As part of the guideline development process, a systematic review of on the benefits and harms was conducted to collect and produce the evidence base for the guideline. More than 8,000 titles and abstracts were screened for the systematic review, and a manuscript has been prepared and is currently under consideration for publication with a peer-reviewed journal. Manuscript preparation for the guideline itself is currently underway, supported by a diverse team of experts (see Collaborations section). Completion and publication of the Statins deprescribing guideline is expected in 2024.

Funder: Ministry of Health of Ontario, through the Innovation Fund Provincial Oversight Committee (IFPOC) (\$100,000); additional funding through Health Canada (granted to Dr. Wade Thompson, UBC).

### *Inappropriate Prescribing of Antipsychotics and Linguistic Factors*

Appropriate use of medication is an important indicator of the quality of care provided in long-term care (LTC). Previous studies have identified risk factors for potentially inappropriate prescribing (PIP) of antipsychotics, but the role of language concordance has yet to be researched. We conducted a population-based, retrospective cohort study of LTC residents in Ontario, Canada from 2010 to 2019 to determine whether resident-facility language concordance/discordance affects the odds of PIP of antipsychotics in LTC. Our analysis identified several linguistic factors associated with the odds of PIP of antipsychotics in long term care, including resident-facility language concordance. The study makes use of Ontario's rich population health databases ('ICES data'). A manuscript for this study is currently in preparation for submission for publication in early 2024.

Overlapping Themes – Linguistic Factors

Funder: Consortium National de Formation en Santé – uOttawa chapter (\$39,900).

### Linguistic Factors Theme

#### *Access to Care and Travel Burden by Language*

Overlapping themes – see Access to Care section above for project description.

#### *Inappropriate Prescribing of Antipsychotics and Linguistic Factors*

Overlapping Themes– see Medication Appropriateness section above for project description.

#### *A Research Community to Improve Health Services for Francophone Minority Communities in Canada*

The collection of linguistic variables in health data is limited in Canada, posing a major challenge for research. To address this issue, we are currently conducting an assessment of the availability of valid and comparable linguistic information collected by the various population health databases in Canada. This project aims to build and validate a reference tool on linguistic information ('meta-data repository') and to foster research collaborations aimed at improving healthcare services for French-speaking and other linguistic minorities in Canada. To help achieve this goal, we are creating a national network of researchers and collaborators interested in the study of health and health care of francophone minority communities. The network will produce recommendations and tools to strengthen research capacity and collaboration across Canada.

Funder: CNFS uOttawa (\$100,000)

#### *Geospatial mapping analysis of access to health care for official language minority communities (OLMC) in rural and remote regions of Ontario*

Access to health care in rural and remote areas is particularly difficult for official-language minority populations, including Francophones in Northern Ontario. Our study will examine the impact of the travel burden faced by populations in Northern Ontario to access language-concordant care. In addition, an interactive map locating the practice locations of family physicians and specialists working in Northern Ontario will be added to the Docmapper.ca/Trouvezmedicin.ca tool and made available the public.

Funder: CIHR Spring Project Grant (\$100,000)

#### *Primary Care and French-Language Minorities: Exploring regional access and inequities in language-concordant primary care for French speakers*

Language-concordant healthcare is an important element of health equity and is associated with improved health outcomes and reduced mortality. However, research has found that Francophones in Ontario often have difficulty accessing primary care in French. Our study aims to evaluate the supply and demand for French-speaking primary care at the population level. We will conduct a cross-sectional geospatial analysis to quantify access to language-concordant primary care across Ontario. The results of this study will enable patients, physicians, and policymakers to identify gaps in access and improve language-concordant healthcare for Francophones living in Ontario. This project will also lead to the expansion of our Docmapper tool to all of Ontario.

Funder: INSPIRE-PHC AHRQ (\$25,000)

## Innovative Tools and Methods Theme

### *Access to Care and Travel Burden by Language*

Overlapping themes – see Access to Care section above for project description.

### *Getting Ahead of the Curve: Predictive COVID-19 Case Identification Using an Iterative Propensity Score Modelling and AI Approach*

We used Ontario's large population health databases housed at ICES to create a cohort of residents of the city of Ottawa, Ontario (approximately 1 million individuals) during the COVID-19 pandemic. Using demographic, socio-economic and health data (including COVID-19 PCR test results and symptom data), we developed predictive models for the purpose of COVID-19 case identification using the following approaches: classical multivariate logistic regression (LR); deep neural network (DNN); random forest (RF); and gradient boosting trees (GBT). Comparisons were made using the area under the curve (AUC) swarm plot for 10-fold cross-validation. In the various pairwise comparisons between methods, the Gradient Boosting Trees (GBT) approach significantly outperformed logistic regression as well as to other AI/ML approaches in terms of predictive ability. By comparing the established with the new, this methodologic study has the potential to introduce AI/ML analytics to the field of population health data research on a broader scale. A manuscript for this study is currently in preparation for submission by the end of March 2024.

Funders: Ministry of Health of Ontario, through the Innovation Fund Provincial Oversight Committee (IFPOC) (\$98,400); University of Ottawa Faculty of Medicine, AI seed funding (\$10,000); Southern Ontario Smart Computing Innovation Platform (SOSCIP), In kind funding for cloud computing resources (\$30,000).

## KNOWLEDGE DISSEMINATION

### Presentations

#### *International*

- Webber, C., Milani, C., Watt, C.L., Bush, S.H., Lawlor, P.G., Casey, G., **Bjerre, L.M.**, Pugliese, M., Knoefel, F., Momoli, F., Thavorn, K., & Tanuseputro, P. (2022, September 7-9). *Potentially inappropriate prescribing in long-term care residents and its association with probable delirium* [Oral Presentation]. International Population Data Linkage Network (IPDLN) Conference 2022. Edinburgh, Scotland.

#### *National*

- **Bjerre L.M.**, Batista R, Pugliese M, Tanuseputro P. (2023, November 8-9.). *The impact of patient-facility language concordance on potentially inappropriate prescribing of antipsychotics in long-term care: a population health data study.* [Oral Presentation]. Canadian Medication Appropriateness & Deprescribing Network (CADeN) National Meeting 2023, Montreal, Quebec, Canada.
- **Bjerre L.M.**, Batista R, Pugliese M, Tanuseputro P. (2023, June 6-8). *The impact of patient-facility language concordance on potentially inappropriate prescribing of antipsychotics in long-term care: a population health data study.* [Oral Presentation]. Health Canada Colloquium 2023, Virtual, Canada.
- Martin-Schreiber V, **Bjerre L.M.** (2023, June 6-8). *Leveraging the latest technology as a contributor to a more balanced bilingualism in Canada.* [Oral Presentation]. Health Canada Colloquium 2023, Virtual, Canada.
- Belanger C, Carr K, Peixoto C, **Bjerre L.M.** (2023, June 6-8). *Distance, access and equity: A cross-sectional geospatial analysis of disparities in access to primary care for official-language minorities in Ottawa, Ontario.* [Oral Presentation]. Health Canada Colloquium 2023, Virtual, Canada.
- Martin-Schreiber V, Tanuseputro P, **Bjerre L.M.** (2023, June 6-8). *Une communauté de recherche pour améliorer les services de santé pour les communautés francophones en situation minoritaire au Canada.* [Oral Presentation]. Health Canada Colloquium 2023, Virtual, Canada.

- **Bjerre L.M.**, Batista R, Pugliese M, Tanuseputro P. (2023, May 29-31). *The impact of patient-facility language concordance on potentially inappropriate prescribing of antipsychotics in long-term care: a population health data study*. [Oral Presentation]. CAHSPR 2023, Montreal, Quebec, Canada.
- Belanger C, Carr K, Peixoto C, **Bjerre L.M.** (2023, May 29-31). *Distance, access and equity: A cross-sectional geospatial analysis of disparities in access to primary care for official-language minorities in Ottawa, Ontario*. [Poster Presentation]. CAHSPR 2023, Montreal, Quebec, Canada.
- Batista, R., Roberts, R., Rhodes, E., Sucha, E., Pugliese, M., Reaume, M., Kendall, C., **Bjerre, L.M.**, Bouchard, L., Prud'homme, D., Manuel, D.G., & Tanuseputro, P. (2022, May 31- June 2). *Prevalence and complexity of multimorbidity among frail patients receiving home care in Ontario: a retrospective cohort* [Oral Presentation]. Virtual Poster Session and Networking, CAHSPR 2022, Virtual, Canada. Retrieved from <https://cahspr.ca/wp-content/uploads/2022/06/Book-of-Abstract-Posters-CAHSPR-2022-May-2022-1.pdf>.

#### Provincial

- **Bjerre, L.M.** (2022, October 14). *"I need a family doctor!! How can I find one?" Docmapper.ca: An interactive map to support (language-concordant) access to primary care* [Oral Presentation]. 2022 Trillium Primary Health Care Research Day, Toronto, Ontario, Canada.

#### Regional

- **Bjerre L.M.** (2023, November 23). *Distance and language: Impact on access and equity in primary care - and other thoughts on primary care research and scholarly work*. [Oral Presentation]. University of Ottawa, Department of Family Medicine, Grand Rounds, Ottawa, Ontario, Canada.
- **Bjerre, L.M.** (2022, March 31). *À l'heure de la déprescription* [Oral Presentation]. Journées Montfort 2022, Ottawa, Ontario, Canada.

#### Publications (Peer Reviewed) and Reports

- Kueper J, Emu M, Banburry M, **Bjerre LM**, Chaudhury S, Green M, Pimlott N, Slade S, Tsuei S, Sisler J. (2023). Artificial Intelligence for Family Medicine Research in Canada: Current State and Future Directions. *CFP*. [In Press].
- Rudoler D, Austin, Allin S, **Bjerre LM**, Dolovich L, Glazier RH, Grudniewicz A, Laporte A, Martin E, Schultz S, Sirois C, Strumpf E. (2023). The impact of team-based primary care on medication-related outcomes in older adults: A comparative analysis of two Canadian provinces. *Prev Med Rep*, 36:102512. doi: [10.1016/j.pmedr.2023.102512](https://doi.org/10.1016/j.pmedr.2023.102512).
- Batista R, Reaume M, Roberts R, Seale E, Rhodes E, Sucha E, Pugliese M, Kendall C, **Bjerre LM**, Bouchard L, Prud'homme D, Manuel D, Tanuseputro P. (2023). Prevalence and patterns of multimorbidity among linguistic groups of patients receiving home care in Ontario: a retrospective cohort study. *BMC Geriatr*. 23(1):725. doi: [10.1186/s12877-023-04267-5](https://doi.org/10.1186/s12877-023-04267-5).
- Webber C, Milani C, **Bjerre LM**, Lawlor PG, Bush SH, Watt CL, Pugliese M, Knoefel F, Casey G, Momoli F, Thavorn K, Tanuseputro P. (2023). Potentially inappropriate prescribing in long-term care and its relationship with probable delirium. *J Am Med Dir Assoc*, S1525-8610(23)00743-0. doi: [10.1016/j.jamda.2023.08.019](https://doi.org/10.1016/j.jamda.2023.08.019).
- Belanger C, **Bjerre LM**. (2023). Analyzing the Spatial Distribution and Language Abilities of Physicians in Alberta, Canada. *MedRxiv*. [Preprint]. doi: [10.1101/2023.09.14.23295573](https://doi.org/10.1101/2023.09.14.23295573).
- Buchanan S, Peixoto C, Belanger C, Archibald D, **Bjerre LM**, Fitzsimon J. (2023). Investigating Patient Experience, Satisfaction, and Trust in an Integrated Virtual Care (IVC) Model: A Cross-Sectional Survey. *Ann Fam Med*, 21(4), 338-340. doi: [10.1370/afm.2978](https://doi.org/10.1370/afm.2978).
- Belanger C, Carr K, Peixoto C, **Bjerre LM**. (2023). Distance, access and equity: a cross-sectional geospatial analysis of disparities in access to primary care for French-only speakers in Ottawa, Ontario. *CMAJ Open*, 11(3), E434-E442, doi: [10.9778/cmajo.20220061](https://doi.org/10.9778/cmajo.20220061).
- Fitzsimon JP, Belanger C, Glazier RH, Green M, Peixoto C, Mahdavi R, Plumtre L, **Bjerre LM**. (2023). Clinical and economic impact of a community-based, hybrid model of in-person and virtual care in a Canadian rural setting: a cross-sectional population-based comparative study. *BMJ Open*, 13(5), e069699. doi: [10.1136/bmjopen-2022-069699](https://doi.org/10.1136/bmjopen-2022-069699).

- Li, A.Ht., Garg, A.X., Grimshaw, J.M., Prakash, V., Dunnett, A.J., Dixon, S.N., Taljaard, M., Mitchell, J., Naylor, K.L., Faulds, C., Bevan, R., Getchell, L., Knoll, G., Kim, S.J., Sontrop, J., Tong, A., **Bjerre, L.M.**, Hyjek, K., Currie, D., Edwards, S., Sullivan, M., Harvey-Rioux, L., & Presseau, J. (2022). Promoting deceased organ and tissue donation registration in family physician waiting rooms (RegisterNow-1): a pragmatic stepped-wedge, cluster randomized controlled registry trial. *BMC Med*, 20(1), 75. doi [10.1186/s12916-022-02266-8](https://doi.org/10.1186/s12916-022-02266-8)
- Taher, M.K., Crispo, J.A.G., Fortin, Y., Moog, R., McNair, D., **Bjerre, L.M.**, Momoli, F., Mattison, D., & Krewski, D. (2022). Systemic quinolones and risk of retinal detachment III: a nested case-control study using a US electronic health records database. *Eur J Clin Pharmacol*, 78(6), 1019-1028. doi: [10.1007/s00228-021-03260-4](https://doi.org/10.1007/s00228-021-03260-4)
- Taher, M.K., Alami, A., Gravel, C.A., Tsui, D., **Bjerre, L.M.**, Momoli, F., Mattison, D., & Krewski, D. (2022). Systemic quinolones and risk of retinal detachment I: analysis of data from the US FDA adverse event reporting system. *Expert Opin Drug Saf*, 21(2), 269-276. doi: [10.1080/14740338.2022.1993187](https://doi.org/10.1080/14740338.2022.1993187)

## Online Publications, Visualization Platforms and Tools

- ❖ [Docmapper.ca](https://docmapper.ca) – [trouvezunmedecin.ca](https://trouvezunmedecin.ca) – Online interactive map of Ottawa, Renfrew County family and Alberta physicians. Created by C. Belanger, with input from K. Carr, S. Francoeur and J. Fitzsimon, and **LM Bjerre** (project lead).

## Media Appearances

### Broadcast Interviews

- **Bjerre, L.M.** (2022, November 15). Interviewed by Philippe Marcoux (at 16:12). Comment trouver un médecin dans sa langue à Ottawa? In Radio-Canada (prod.), *Sur le vif*.
- <https://ici.radio-canada.ca/ohdio/premiere/emissions/sur-le-vif/episodes/668343/rattrapage-du-mardi-15-novembre-2022/5>

### Online articles

- **Bjerre, L.M.** (2022, November 21). *Nouvel outil pour identifier un médecin dans sa langue*. Le Droit numérique. <https://www.ledroit.com/2022/11/21/nouvel-outil-pour-identifier-un-medecin-dans-sa-langue-52c484479690271632623a44f5088921>
- **Bjerre, L.M.** (2022, November 15). *DocMapper.ca: New online tool finds a family doctor in your language in Ottawa and Renfrew County areas* [News Release]. University of Ottawa. <https://www.uottawa.ca/about-us/media/news/docmapperca-new-online-tool-finds-family-doctor-your-language-ottawa-and-renfrew-county-areas>
- **Bjerre, L.M.** (2022, November 15). *DocMapper.ca: New online tool finds a family doctor in your language in Ottawa and Renfrew County areas*. EurekAlert!/AAAS. <https://www.eurekalert.org/multimedia/965129>
- **Bjerre, L.M.** (2022, January 11). *600,000 rapid test boxes to be distributed in Quebec starting today and more are on the way*. CBC News. <https://www.cbc.ca/news/canada/montreal/rapid-test-boxes-quebec-distribution-1.6310090>
- **Bjerre, L.M.** (2022, January 11). *600,000 rapid test boxes to be distributed in Quebec starting today and more are on the way*. Yahoo Sports Canada. [600-000-rapid-test-boxes-090000471.html](https://sports.yahoo.com/600-000-rapid-test-boxes-090000471.html)
- **Bjerre, L.M.** (2022, January 11). *600,000 rapid test boxes to be distributed in Quebec starting today and more are on the way*. Milenio Stadium. <https://mileniostadium.com/canada/600000-rapid-test-boxes-to-be-distributed-in-quebec-starting-today-and-more-are-on-the-way/>

## RESEARCH PROCESSES

### Research Team

One of the key activities of the Chair in the past two years has been to focus on the development and growth of the research team. This has been one of the key drivers of the Chair's program of research. At the beginning of the Chair's tenure, the team was composed of only three members, Dr. Bjerre, and two research staff members supported by previously acquired funding. Since then, the team has grown significantly in number of team members, and expertise, including the addition, in 2023, of a research assistant and two new research coordinators to support Dr. Bjerre and, more recently, Dr. Fitzsimon with their programs of research. Members of the Chair's research team throughout 2022 and 2023 included:

- Dr. Jonathan Fitzsimon – Early Career Clinician-Investigator; Medical Lead Renfrew County VTAC & IVC (2022, 2023)
- Dr. Christopher Belanger – Associate Member (2023); Postdoctoral Fellow (2022)
- Shawna Cronin – Postdoctoral Fellow (2022)
- Myriam Duquet – Research Associate (2022, 2023)
- Cayden Peixoto – Research Coordinator (since 2020)
- Vincent Martin-Schreiber – Research Coordinator (since 2022)
- Antoine St. Amant – Research Coordinator (supporting Dr. Fitzsimon since 2023)
- Leanda Godfrey – Research Assistant (since 2023)
- Marie-Claire Namroud – Administrative Assistant (2022)
- Student Team Members
  - Masters Student – Alyson MacCormack (2022, 2023)
  - Undergraduate Student – Sara Francoeur (2022, 2023)
  - Undergraduate Student – Yasmeen Choudhri (2022)
  - Medical Student – Samantha Buchanan (2022)
  - Medical Student – Kush Patel (2022)
  - Medical Student – Kevin Min (2022)
  - Medical Student – Sohana Farhin (2022)
- Associated members:
  - Dr. Cleo Mavriplis, family physician and creator of Icanbewell.ca/Choixsante.ca: The Innovative digital App to reimagine resourcing for primary care and unattached patients.
  - Dr. Veera Mirdavoudi, family physician in private practice, and physician-scholar at ISM (3<sup>rd</sup> year residency program, scholarly stream).

### Research Tools and Management

#### *Microsoft Teams Platform*

To enhance efficient collaboration and communication among team members, our team has shifted to using the Microsoft Teams Platform for document sharing, meeting scheduling, and project communication. This transition is ongoing and began in the late Fall of 2023.

#### *Monthly Team Meetings*

Initially, when the team was still quite small, meetings were held weekly with everyone on the team attending. As the team and the number of projects grew over the year, it became clear that a new structure was needed. We shifted to holding monthly team meetings, with project meetings for specific projects being held every 2 to 3 weeks, as needed depending on the nature of the project. For a given project, there is usually a core working group (CWG) of 3-5 people who meet every other week and do the bulk of the work, and a broader steering committee (SC) composed of collaborators and co-investigators less involved with the actual conduct of the project but who provide feedback, input and guidance based on their respective expertise and skill set. This format of conducting project has proven to be very effective, and ensures that momentum is built and kept up from project inception to completion.

#### *Tracking - Grants, Ethics and Knowledge Dissemination Opportunities*



To support the management of multiple projects with a variety of funding sources, both monetary and in-kind, research ethic board (REB) approvals, and knowledge dissemination goals and deliverables, tracking sheets are updated biweekly by our research coordinator(s) and/or assistant, and reviewed monthly at our team meeting. This facilitates group discussions knowledge dissemination (abstract/manuscript submissions and presentations at upcoming conferences), and allows for effective task allocation among team members to meet reporting deadlines for REBs and grant agencies.

#### Website

We are in the final stages of creating a website which is meant as a window for our team to showcase its work to the world, and to support networking and patient engagement. The website features brief biographies of team members, project descriptions and lists of outputs, be they publications, patient- and provider-tailored tools, and infographics, as well as useful links and information about pertinent upcoming events. An official launch will be planned in the coming month or so.

#### Happiness/Performance Reviews

Instead of the usual ‘performance reviews’, Dr. Bjerre has started holding ‘happiness’ reviews, with a focus on work satisfaction, both for the employee or trainee, and for the supervisor. The discussion focuses on whether each is happy with the work environment, pace, productivity, etc. This is done in an informal way, and is helps our team to identify potential opportunities for improvement, and develop strategies to implement solutions – and to celebrate what is going well.

### Research Collaborations

Dr. Bjerre’s projects usually involve co-investigators and collaborators from diverse backgrounds. They are chosen and invited to join a project due to their specific expertise in a given area. A list of collaborators for each project, together with their institutional affiliation, can be found below:

**Table 3.** Collaborators on Chair program of research projects, by research theme:

#### 3a. Medication appropriateness

Project	Name	Institution	Role
<b>Statins Deprescribing Guideline</b>	Dr. Wade Thompson	University of British Columbia	Pharmacist & Methods Expert; co-lead
	Dr. Lisa McCarthy	University of Toronto	Pharmacist
	Dr. Parag Goyal	Cornell University	Cardiologist
	Dr. Geneviève Lemay	The Ottawa Hospital and the Montfort Hospital	Geriatrician
	Dr. Celeste Fung	St-Patrick’s Home of Ottawa (long-term care home)	Long-term care Physician
	Dr. Arden Barry	University of British Columbia	Pharmacist
	Dr. Rita McCracken	University of British Columbia	Family Physician

	Dr. Dar Dowlatshahi	The Ottawa Hospital	Neurologist
	Dr. Ruth Martin-Misener	Dalhousie University	Nurse Practitioner
	Johanna Trimble	Canadian Patient Safety Institute	Patient Representative
	Cayden Peixoto	Institut du Savoir Montfort	Research Coordinator
	Ellen Reynolds	University of British Columbia	Research Manager
<b>Inappropriate Prescribing of Antipsychotics and Linguistic Factors</b>	Dr. Peter Tanuseputro	Ottawa Hospital Research Institute	Family Physician/Health Services Researcher
	Dr. Ricardo Batista	Institut du Savoir Montfort	Associate Researcher/Experience with ICES data
	Michael Pugliese	ICES	Research Analyst
	Dr. Michael Reaume	University of Manitoba	Medical resident; early career researcher
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Dr. Roland Halil	Bruyère Research Institute/ University of Ottawa	Pharmacist/Design and interpretation
	Dr. Kednapa Thavorn	Ottawa Hospital Research Institute (OHRI)	Senior Scientist at OHRI/Methodologic support for the economic analysis
	Dr. Colleen Webber	Ottawa Hospital Research Institute (OHRI)	Senior Research Associate/Epidemiology and quantitative methods
	Dr. Claire Kendell	Bruyère Research Institute/ University of Ottawa	Senior Research Investigator/Experience with ICES data
	Dr. Josette-Renée Landry	Institut du Savoir Montfort (ISM)	Senior Scientist and CEO at ISM/Methodological support, design and results interpretation
	Dr. Denis Prud'homme	University of Moncton	President and Senior Researcher

	Dr. Marie-Helene Chomiene	Institut du Savoir Montfort (ISM)	Clinician Investigator/Chair in Francophonie Internationale
	Dr. Barbara Farrell	Bruyere Research Institute	Pharmacist/Design and interpretation of results

### 3b. Access to care and virtual care

Project	Name	Institution	Role
<b>Ottawa Access to Care and Travel Burden by Language</b>	Kady Carr	University of Ottawa, Ottawa Neighbourhood Study	Program Manager
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Dr. Chris Belanger	Institut du Savoir Montfort (ISM)	Geospatial mapping Analyst; Postdoctoral Researcher
<b>Docmapper.ca/Trouvezme dici.ca User Satisfaction Evaluation</b>	Dr. Chris Belanger	Institut du Savoir Montfort (ISM)	Geomapping Analyst; Postdoctoral Researcher
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Sara Francoeur	University of Ottawa	Student Researcher
<b>Assessing the Clinical and Economic Impact of a COVID-19 Virtual Triage and Assessment Centre (VTAC) in a Canadian Rural Setting</b>	Dr. Jonathan Fitzsimon	University of Ottawa, Department of Family Medicine	Medical Lead at Renfrew County Virtual Triage and Assessment Centre (VTAC)
	Dr. Chris Belanger	Institut du Savoir Montfort (ISM)	Postdoctoral Researcher
	Roshanak Mahdavi	ICES	Research Analyst
	Dr. Lesley Plumptre	ICES	Staff Scientist
	Dr. Rick Glazier	ICES	Senior Scientist
	Dr. Michael Green	Queen's University, Department of Family Medicine	Department Head; Family Physician
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
<b>Renfrew County Integrated Virtual Care (IVC) Provider Satisfaction</b>	Samantha Buchanan	University of Ottawa, Faculty of Family Medicine	Student Researcher
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Dr. Douglas Archibald	University of Ottawa, Department of	Director of Research and

		Family Medicine	Innovation
	Dr. Jonathan Fitzsimon	University of Ottawa, Department of Family Medicine	Medical Lead at Renfrew County Integrated Virtual Care (IVC)
<b>VTAC Provider Satisfaction Evaluation</b>	Kush Patel	University of Ottawa, Faculty of Family Medicine	Student Researcher
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Dr. Jonathan Fitzsimon	University of Ottawa, Department of Family Medicine	Medical Lead at Renfrew County Virtual Triage and Assessment Centre (VTAC)

### 3c. Linguistic factors

Project	Name	Institution	Role
<b>A Research Community to Improve Health Services for Francophone Minority Communities in Canada</b>	Marie-Hélène Chomienne	University of Ottawa	Co-principal Investigator
	Alain Gauthier	Laurentian University	Co-principal Investigator
	Josette-Renée Landry	Institut du Savoir Montfort (ISM)	Co-principal Investigator
	Denis Prud'homme	Université de Moncton	Co-principal Investigator
	Peter Tanuseputro	Ottawa Hospital Research Institute (OHRI)	Co-principal Investigator
	Ricardo Batista	Akausivik Inuit Family Health Team, Ottawa, ON (formerly with Ottawa Hospital Research Institute (OHRI))	Co-investigator
	Amy Hsu	Bruyère Research Institut	Co-investigator
	Claire Kendall	Bruyère Research Institut	Co-investigator
	Doug Manuel	Ottawa Hospital Research Institute (OHRI)	Co-investigator
	Jan Warnke	Université Laval	Co-investigator
	Geneviève Laferrière	Ministry of Health (MOH)	Collaborator
	Vincent Martin-Schreiber	Institut du Savoir Montfort (ISM)	Research Coordinator

	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
<b>Geomapping analysis of access to health care for official language minority communities (OLMC) in rural and remote regions of Ontario (CLOSM Project)</b>	Jonathan Fitzsimon	University of Ottawa, Department of Family Medicine	Co-investigator
	Alain Gauthier	Laurentian University	Co-investigator
	Sharon Johnston	Institut du Savoir Montfort (ISM)	Co-investigator
	Sathya Karunanathan	University of Ottawa	Co-investigator
	Krystal Kehoe MacLeod	Bruyère Research Institute	Co-investigator
	Mwali Muray	University of Ottawa	Co-investigator
	Annie Robitaille	University of Ottawa	Co-investigator
	Peter Tanuseputro	Ottawa Hospital Research Institute (OHRI)	Co-investigator
	Patrick Timony	Laurentian University	Co-investigator
	Christopher Belanger	Institut du Savoir Montfort (ISM)	Collaborator
	Geneviève Laferrière	Ministry of Health (MOH)	Collaborator
	Luc Comeau	Association de la Francophonie de l'Ontario	Collaborator
	Adrienne Gaudreault	Ottawa Hospital Research Institute (OHRI)	Collaborator
	Julie Lataigne	Société Santé en Français	Collaborator
	Vincent Martin-Schreiber	Institut du Savoir Montfort (ISM)	Collaborator
	Diane Quintas	Société Santé en Français	Collaborator
	Lise Richard	Société Santé en Français	Collaborator

### 3d. Innovative tools and methods

Project	Name	Institution	Role
<b>Getting ahead of the curve (AI for predictive COVID modeling in population health data)</b>	Rob Talarico	ICES	Research Analyst
	Cayden Peixoto	ISM	Research Coordinator
	Dr. Rami Abielmona	Larus Technologies	VP Research and Engineering
	Dr. Rawan Alkurd	Larus Technologies	Data Scientist
	Alex Teske	Larus Technologies	Data Scientist
	Dr. Emil Petriu	University of Ottawa	Co-investigator
	Dr. Kumanan Wilson	University of Ottawa	Co-investigator
	Dr. Gary Garber	Public Health Ontario	Co-investigator
	Dr. Margaret Wilson	University of Strathclyde, Scotland	Collaborator
	Dr. Marion Bennie	University of Strathclyde, Scotland	Collaborator
	Dr. Patrick Redmond	King's College London, UK	Collaborator
	Dr. Berit Lavik	Nygart Hospital, Denmark	Collaborator
	Dr. Stephania Rodella	Italian Epidemiological Association	Collaborator
	Dr. Mauro Venegoni	University of Verona, Italy	Collaborator
	Dr. Polo Friz	Vimercate Hospital, Azienda Socio Sanitaria di Vimercate, Vimercate (MB), Italy	Collaborator
	<b>Ottawa Access to Care and Travel Burden by Language</b>	Kady Carr	University of Ottawa, Ottawa Neighbourhood Study
Cayden Peixoto		Institut du Savoir Montfort (ISM)	Research Coordinator
Dr. Chris Belanger		Institut du Savoir Montfort (ISM)	Postdoctoral Researcher
<b>Primary Care and</b>	Dr. Chris Belanger	Belanger Analytics Adjunct professor, Telfer School of	Geospatial Analyst

<b>French-Language Minorities: Exploring Regional Access and Inequities in Language-Concordant Primary Care for French Speakers</b>		Management	
	Cayden Peixoto	Institut du Savoir Montfort (ISM)	Research Coordinator
	Myriam Taillon	Ontario Health (East)	Knowledge User
	Angèle Desbiens	Ontario Health (North West)	Knowledge User
	Erica Erwin	Ontario Health (East)	Knowledge User

Likewise, Dr. Bjerre has been invited to collaborate on projects and initiatives led by other researchers. A list of collaborations in which Dr. Bjerre is involved can be found below:

**Table 4. Projects on which Dr. Bjerre is a collaborator**

Project	Name of lead/PI	Institution	Role
<b>CFPC Scientific Advisory Committee on Artificial Intelligence (AI) in Family Medicine</b>	Jacqueline K Kueper	College of Family Physicians of Canada (CFPC)	<b>Dr. Bjerre</b> is a member of the scientific advisory committee on AI in Family Medicine, in collaboration with Emu M, Banburry M, Chaudhury S, Green M, Pimlott N, Slade S, Tsuei S, and Sisler J.
<b>The Impact of COVID-19 on Francophones and Other Minority Language Groups Living in Long-term Care or Receiving Home Care.</b>	Peter Tanuseputro/Colleen Webber	Ottawa Hospital Research Institute, Institut du Savoir Montfort, and University of Ottawa	<b>Dr. Bjerre</b> is a co-investigator on this project, in collaboration with Backman C, Barista R, Bjerre L, Carrier M, Chomienne MH, Collin S, Fernando S, Gaudreault A, Gauthier A, Hsu A, Johnston S, Kim W, Karunanathan S, Kehoe MacLeod K, Kendall C, Landry J, Li W, Murray M, Prud'homme D, Reaume M, Robitaille A, Sood M, Tang P, Vessey R, Wang T, Webber C, and Xu Y.
<b>Gains and Losses – Physician Supply and Access to Care in Ontario</b>	Kamila Premji	Department of Family Medicine University of Ottawa; Western University	<b>Dr. Bjerre</b> is a co-investigator on this project, in collaboration with Fitzsimon J, Frymire E, Ryan B, Mathews M, Green M, Nguyen P, Glazier R, and Turcotte S.
<b>The Causes and Impact of Trauma Overtriage in Ontario</b>	Dr. Avery Nathens, supervisor to Dr. Bourke Tillman, PhD candidate in Clinical Epidemiology	Institute of Health Policy, Management, and Evaluation <b>University of Toronto</b> and Sunnybrook Health Sciences Centre, Department of Critical Care Medicine	<b>Dr. Bjerre</b> is supporting Dr. Tillman in his PhD work by providing expertise on the application of the STOPP-START and Beers criteria to a population health data project on inappropriate prescribing in trauma patients.

## Academic and Other Activities

- 2023 - Present** Affiliated Researcher, INSPIRE-PHC (<https://inspire-phc.org/our-team/>)
- 2022 – Present** Faculty of Medicine Clinical Teaching Personnel Committee (CTPC; ‘promotions committee’), member (3-year term, renewable)
- 2021 – Present** Member, CFPC Scientific Advisory Committee on AI in Family Medicine
- 2021 – Present** Member, Research Community of Practice Committee, Department of Family Medicine, University of Ottawa
- 2020 – Present** Adjust Scientist (Full Status), Institute for Clinical Evaluative Sciences (ICES)
- 2020 – Present** Member, CIHR College of Reviewers
- 2017 – Present** OPEN Scientist, Ontario Pharmacy Research Network (OPEN) (<https://open-pharmacy-research.ca>)
- 2022 (Jan to Jun)** Member, Canada Research Chair in Indigenous Health Selection Committee, Faculty of Medicine, University of Ottawa (sundowned)
- 2022** Invited participant, Medical Artificial Intelligence Initiative, Mini-retreat, Faculty of Medicine, University of Ottawa, Ottawa, Ontario, Canada.
- 2021 – 2022** Member, Research Executive Committee, Department of Family Medicine, University of Ottawa
- 2021 – 2022** Member, Women University Research Chairs, University of Ottawa (sundowned)

## Awards and Recognitions

- 2022** Canadian Federation of Medical Students Culture Changer nominee – The Culture Changers’ Campaign – highlights physicians across Canada who are creating safe and supportive learning environments for medical students.
- 2021 – 2022** Physician Leadership Development Grant recipient, The Ottawa Hospital (\$1,500), to fund participation in a leadership course or training program. Awarded on a competitive basis. Used to carry out the *PEAK MD executive leadership coaching program*.

## Clinical care

After 13 years as a staff physician with the Civic Family Health Team, Dr. Bjerre has, for personal reasons, moved her practice to Kanata North. Since June 1<sup>st</sup>, 2023, she continues to practice comprehensive family medicine, including urgent care, at the ActiveCare Medical Clinic (Klondike site), initially as a contracted physician, and since Jan. 1<sup>st</sup> 2024, as a Family Health Organization (FHO) signatory.



## PLANNING FOR 2024 AND BEYOND

### Annual goals for 2024

Goals for the year ahead include continued growth of the team, a sharp focus on knowledge dissemination and publication, and the acquisition of programmatic funding. Secondary goals include consolidating newly established work and team management tools and processes. Specific goals for 2024 include:

- ❖ Grow the team in size and skill – capacity building and supporting colleagues who wish to engage in research/evaluation activities;
- ❖ Continue offering trainee experiences: for example, we are currently seeking to recruit a post-doctoral fellow
- ❖ Increase research funding by at least \$200,000 of new active funding in 2024
- ❖ Acquire programmatic funding in 2024 – submission made to CIHR in Fall 2023 is pending decision (expected Jan. 31st 2024); depending on outcome, planning submission to CIHR spring 2024 project grant competition
- ❖ Seek additional (incl. non-traditional) sources of programmatic funding to ensure stability of operational budget over next 2-5 years
- ❖ Publish at least 4 papers with the Chair (or her research team members) as first or senior author
- ❖ Increase international reach: present at least 2-3 abstracts at least 1 international conference in 2024
- ❖ Continue to evaluate and improve team processes:
  - Retreats – 2 per year (done in 2022; well-received by team)
  - Writing days – 1 per quarter/bimonthly (done in 2022; well-received by team)
  - Increase work scope of research assistants to support ongoing projects and administrative processes, including tracking of study activities and knowledge dissemination. Standardize/streamline approach to hiring/remunerating students/trainees.
- ❖ Increase/maintain team members’ work satisfaction; formalize evaluation and mutual feedback sessions (annually) with team members.
- ❖ Work with ISM to improve IT, HR and finance support.
- ❖ Establish support for professional development of team members (courses, certifications, etc.)

### Ongoing Projects – Expected Milestones in 2024

**Table 5.** Expected research project progress in 2024.

Theme	Project	Milestones
Access to Care	Docmapper.ca/Trouvezmedicin.ca User Satisfaction Evaluation	● Publication of manuscript.
	Renfrew County Virtual Triage and Assessment Centre (VTAC) Patient Experience	● Completion of project and publication of manuscript.
	Renfrew County Integrated Virtual Care (IVC) Patient and Provider Experience	● Completion of project and publication of manuscript.
	Renfrew County Impact of Unattachment Study	● Manuscript completion and submission for publication.
	Prince Edward Island – Access to Care and Patient Outcomes	● Completion of Master’s thesis (Alyson MacCormack). ● Publication of two manuscripts (scoping review and analytic results).
	ECT Wait Time Scoping Review	● Manuscript completion and submission for publication.

Medication Appropriateness	Statins Deprescribing	<ul style="list-style-type: none"> <li>• Publication of systematic review of the benefits and harms of statin continuation vs discontinuation.</li> <li>• Completion of the Statins Deprescribing Clinical Guideline.</li> </ul>
	Inappropriate Prescribing of antipsychotics and linguistic factors (overlapping themes)	<ul style="list-style-type: none"> <li>• Manuscript completion and submission for publication.</li> </ul>
Linguistic Factors	A Research Community to Improve Health Services for Francophone Minority Communities in Canada	<ul style="list-style-type: none"> <li>• Creation of meta-data repository (web-accessible).</li> <li>• Manuscript completion and submission for publication.</li> </ul>
	Geomapping analysis of access to health care for official language minority communities (OLMC) in rural and remote regions of Ontario	<ul style="list-style-type: none"> <li>• Complete analysis.</li> <li>• Start manuscript writing phase.</li> </ul>
Innovative Tools and Methods	AI in Primary Care – Getting Ahead of the Curve (COVID-19)	<ul style="list-style-type: none"> <li>• Manuscript completion and submission for publication.</li> </ul>
	Primary Care and French-Language Minorities: Exploring Regional Access and Inequities in Language-Concordant Primary Care for French Speakers	<ul style="list-style-type: none"> <li>• Completion of project</li> <li>• Publication of manuscript.</li> </ul>

### Long Term Vision (2025 and beyond)

Long-term goals of the Chair include working towards the establishment of a ‘Centre for Primary Care Studies’. The Centre for Primary Care Studies is envisioned as a centre of excellence in primary care research, evaluation, innovation, and improvement. It would be interdisciplinary in outlook, but anchored in family medicine as the core discipline of primary care. The Centre would be led by the uOttawa-ISM Chair in family medicine, and its purpose would be aligned to the mandate of the Chair. One of the *raison d’être* of the Centre would be to provide support and perennity to primary care studies beyond the specific program of research of the Chair. The Centre would also support other researchers and trainees whose work is relevant to the betterment of primary care. The team led by Dr. Bjerre is ideally positioned to give rise to this Centre for Primary Care Studies.

### ACKNOWLEDGEMENTS

Heartfelt thanks go out to:

- ❖ The entire team, for their enthusiastic and competent contributions to the work presented in this report.
- ❖ The Montfort Research Ethics Board (REB), for being extremely prompt, and responsive to all our requests.
- ❖ The major funders of the Chair – the University of Ottawa Department of Family Medicine, the Fondation Montfort, and the Institut du savoir Montfort – for their vision, and for making all this possible.
- ❖ Cayden Peixoto for invaluable help with the preparation of this report, and many others.
- ❖ Finally, Dr. Bjerre wishes to thank her children and her partner for their unwavering and ongoing support on the home front.

### ABBREVIATIONS

A list of acronyms and abbreviations used in this report is provided in the table below:

**Table 6.** Acronyms and abbreviations

AI	Artificial Intelligence	INSPIRE-PHC-AHRQ	Innovations Strengthening Primary Health Care Through Research – Applied Health Research Question
AI/ML	Artificial Intelligence and Machine Learning	ISM	Institut du Savoir Montfort
AMS	Associated Medical Care	IT	Information Technology
AUC	Area Under Curve	IVC	Integrated Virtual Care
CIHR	Canadian Institute for Health Research	LR	Logistic Regression
CLOSM	Communautés De Langue Officielle En Situation Minoritaire	LTC	Long-term Care
CMA	Canadian Medical Association	OHRI	Ottawa Hospital Research Institute
CNFS	Consortium National De Formation En Santé	OLMC	Official Language Minority Communities
CWG	Core Working Group	OSSU-IF-COFFRE	Ontario SPOR Support Unit – Initiative Francophone – Communautés Ontariennes Francophones Facilitant la Recherche Equitable
DNN	Deep Neural Networks	PIP	Potentially Inappropriate Prescribing
DFM	Department Of Family Medicine	REB	Research Ethics Board
ECT	Electroconvulsive Therapy	SC	Steering Committee
ED	Emergency Department	SOSCIP	Southern Ontario Smart Computing Innovation Platform
GBT	Gradient Boosting Trees	SPOR	Strategy for Patient Oriented Research
HR	Human Resources	TOHAMO	The Ottawa Hospital Academic Medical Organization
ICES	Institute for Clinical Evaluative Sciences	UROP	Undergraduate Research Opportunity Program
IFPOC	Innovation Fund Project Oversight Committee	VTAC	Virtual Triage and Assessment Centre

