



2023  
2024

Physician  
Learning  
Program

**Annual  
Report**

# Land Acknowledgment



We acknowledge the traditional lands and territories of the Indigenous peoples who have lived on these lands and have taken care of them since time immemorial. What became known as the Province of Alberta in 1905, is also the traditional and ancestral home and gathering place for diverse Indigenous peoples including the Néhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/Saulteaux), Inuit, and many others whose histories, languages, and cultures continue to influence our vibrant community. We are honoured to have shared these lands now known as part of Treaties 6, 7, and 8, and Métis Homeland.

We acknowledge the many First Nations, Métis and Inuit who have lived in and cared for these lands for generations. We are grateful for the traditional Knowledge Keepers and Elders who are still with us today and those who have gone before us. We make this acknowledgement as an act of reconciliation and gratitude to those whose territory we reside on or are visiting.

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# Letter from the Associate Deans



It is with great pleasure that we share with you our Physician Learning Program (PLP) Annual Report for 2023-2024 on behalf of our interdisciplinary team and engaged clinical, community, and health system partners. As we embark on our new business plan for 2024-2027, it is a natural time to reflect on the many achievements of the past 15 years. We are proud to report that PLP continues to garner provincial, national, and international attention. PLP was recognized for having “measurable quality gains” by the Auditor General of Alberta in 2017, and has attracted attention from across Canada, notably by the Ontario Ministry of Health, the Auditor General of Ontario, the Ontario Medical Association, the Centre for Health Innovation in Manitoba, and the Medical Council of Canada’s 2021 Outstanding Achievement in the Evaluation of Clinical Competence. On June 11, 2024, we celebrated these achievements at our PLP Summit: Advancing practice through the power of partnership, and are looking forward to re-invigorating our improvement community to tackle the challenges of the next three-year business plan.

PLP is a dynamic and highly skilled interdisciplinary group of experts and has become an essential partner in building a high quality and sustainable health care system. As the system continues to evolve, we work to execute on our mission of creating clinically actionable information by engaging with physicians, teams, partners, and patients to co-create sustainable solutions to advance practice. We continue to grow in our expertise, reach, and partnerships.

## **Our work involves:**

- co-creating strategies for advancing practice across the care continuum through rich partnerships bridging community, mental health and addictions care, and primary and tertiary care;
- cultivating deep engagement with our community partners and clinical teams to support system transformation to deliver person-centred care;
- incorporating the health concerns of Albertans including those with disparities and those in equity-deserving communities: women, those living rurally, individuals with uncommon diseases, and those in vulnerable circumstances;
- strengthening data infrastructure to enable clinical quality improvement; and,
- innovating and applying multi-method approaches to understand the complexity of practice context and to co-create improvement interventions to advance practice.



Our 2023-2024 Annual Report highlights outstanding examples of this transformative work. This work would not be possible without the support of our sponsor, Alberta Health, and our many partner organizations throughout the health ecosystem. Special thanks to Alberta Health Services, especially our Strategic Clinical Network partners and clinical operations, our Primary Care Network partners, our community and patient partners, the Health Quality Council of Alberta, and the Faculty of Medicine and Dentistry at the University of Alberta and the Cumming School of Medicine at the University of Calgary.



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# Introduction

For 15 years, the Physician Learning Program (PLP) has evolved and innovated to support interdisciplinary healthcare teams in integrating the best available clinical evidence into practice to advance healthcare for Albertans. Healthcare is a complex ecosystem, and improving it means recognizing that quality of care delivery is not only dependent on clinicians having the best systematically derived, clinical evidence from trials, but also having support to access the resources and integrating them into the complex care for individual people in their unique circumstances.

Our understanding of, and contributions to, the practice and science of implementing improvement initiatives in complex adaptive systems continues to expand. With it, the breadth of skills of our team and engaged partners has blossomed into a world-class team capable of cutting-edge innovation and programs. We work to understand problems through making sense of highly disjointed administrative healthcare data and with qualitative inquiry, human-centred design, and improvement science.

PLP works to advance care by: having an interdisciplinary lens to understand gaps in care; building extensive partnerships to understand problems and co-create solutions; reducing variation in clinical practice while recognizing the need for nuance; fostering timely uptake of proven knowledge and interventions; and reducing low-value care. We provide meaningful and formative feedback, and contextualized information, to physicians and interdisciplinary teams using a supportive, evidence-based approach which creates safe spaces for rich discussion, learning, and community.

A hallmark of PLP approach is partnership. We engage with healthcare professionals and clinical researchers, health system partners, patients, and community. With our partners, we are focused on the Quintuple Aim to support a financially stable healthcare system while improving the health and wellbeing of Albertans. In this, we recognize the need for a healthy clinical workforce, so we have been working hard to foster engagement and community. Execution requires a care experience that fits into people's lives in a sustainable way, and a recognition that equity deserving groups need to be integrated into improvement work continually to understand how to co-create solutions that work for all people. Our reach across the care continuum has increased tremendously, with deliberate emphasis on team-based learning, and deep partnerships with health and social system groups.



# Vision, Mission, and Guiding Principles

## Our Vision

All Alberta physicians will care for patients in a supportive culture, driven by evidence informed, reflective practice improvement.

## Our Mission

PLP creates actionable clinical information by engaging with physicians, teams, partners, and patients to co-create sustainable solutions to advance practice.

## Guiding Principles

PLP is dedicated to moving evidence into practice – fostering a culture and environment where everyone works together to tackle our most pressing problems, advance patient care, and create a world class, sustainable health system.

To do so, we:

- Remain flexible in our approach to problems and solutions, responding to patients, clinicians, and health system needs.
- Use the best available data and evidence-based analysis to support decision-making.
- Work with stakeholders to co-create solutions, implementing and sustaining them provincially.
- Integrate and advance improvement science to address clinical gaps.

## Our Strategic Priorities

The Physician Learning Program is uniquely positioned to help physicians and their teams move evidence into practice. Working together with our strategic partners, we contribute to the delivery of a high quality, efficient, sustainable health-care system that benefits Albertans.

**Improving the delivery of patient care by supporting physicians and teams in data-driven quality improvement.** PLP works with its partners to support systems thinking on projects of significant impact, using a variety of techniques to analyze data and bridge the gap between knowledge and clinical practice.

**Improving and supporting health system sustainability through partnerships across the care continuum.** We work with partners on projects and collaborations that span the continuum of care, thus facilitating a comprehensive approach to address clinical gaps in both primary and specialist care.

**Responding to the health needs of Albertans as they arise.** PLP supports Alberta's health system to address emerging health needs and will continue to build on our work to support physicians, teams, and key stakeholders during and after the COVID-19 crisis

# 2018-2024 Retrospective Infographic

Over the past 6 years, PLP has delivered the following:



Total number of KT events since 2018:

**357**



Attendance at KT events:

**32,399**



Asynchronous views of KT events (since 2020):

**15,327**



Completed projects:

**190**



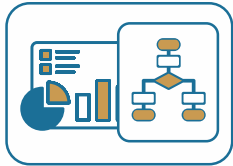
Individualized data reports distributed/viewed:

**3,378**



Aggregate data reports distributed/viewed:

**3,544**



Dashboards, pathways, decision algorithms developed:

**51**



Other tools and resources created:

**169**



Stakeholder presentations (since 2018):

**298**



Participating PCNs:

**27**



Conference presentations:

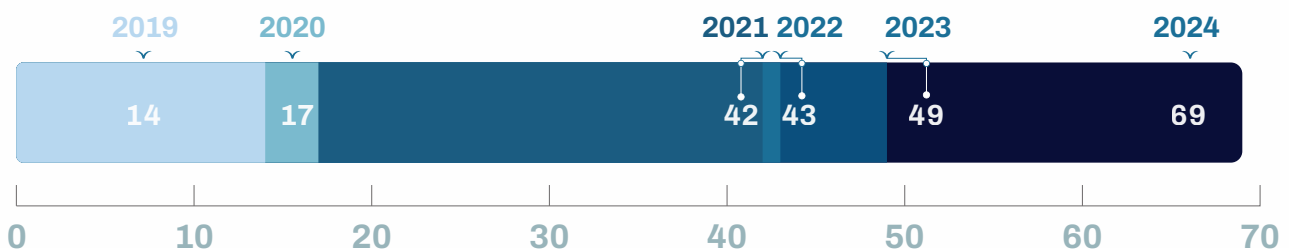
**151**



Total number of publications:

**78**

## Engaged Stakeholders



# Our Team



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# PLP Achievements

**9,125**

Physicians and staff/team members received reports with data, worked with aggregate data, or reflected on new data presented in live or asynchronous feedback/engagement sessions.

**87.8%**

Of physicians/health care providers agreed or strongly agreed that participation in a PLP audit and feedback project helped them reflect on their practice.

**92.5%**

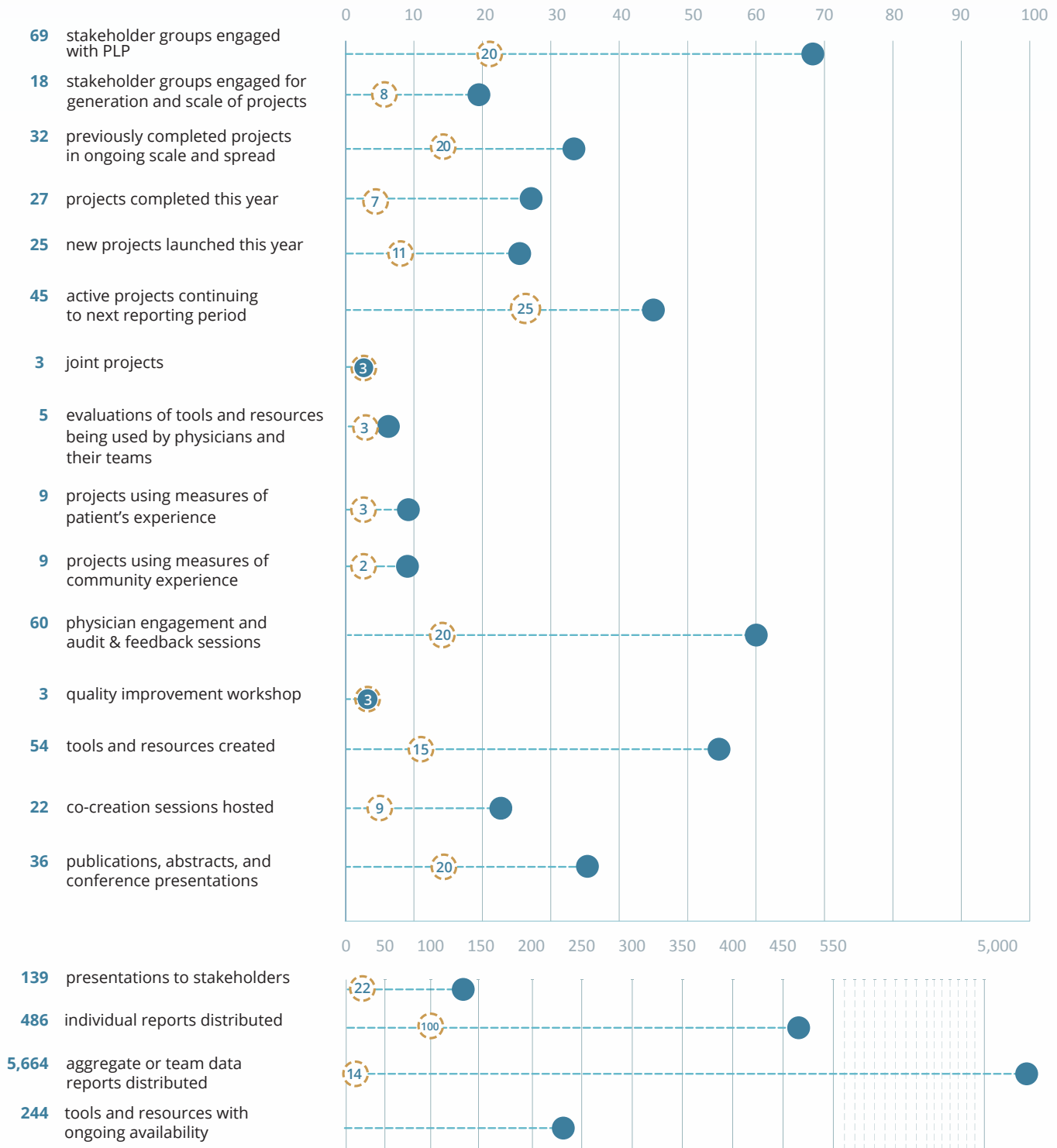
Of physicians/team members agreed or strongly agreed that the information in a PLP event was relevant to their practice

**78.5%**

Of physicians/team members agreed or strongly agreed that they felt confident in implementing change in their practice

○ Target ● Actual

## 2023-24 PLP Outputs



# Our Partners



Supported by a financial contribution from the Government of Alberta



The Physician Learning Program is delivered in partnership through:



# Programs & Projects

## Supporting Family Medicine and Primary Care

Over the past six years, the scope and scale of PLP family medicine and primary care pillar has increased tremendously. Although primary care represented only a tiny fraction of PLP projects prior to 2018, projects for primary care and family medicine represent half of our projects in 2023-24. 27 PCNs are engaged with PLP in a variety of ways: participating in learning events, collaborating on projects, and helping to identify topics for future PLP projects. Our work continues to focus on chronic disease in primary care, including lung diseases, mental health, preventing second heart attacks, managing cholesterol, and pediatric neurodevelopmental disorders. We have also collaborated on learning events regarding diagnosing and treating concussions, and addressing food insecurity. We have multiple ongoing projects that promote appropriate testing, imaging, and prescribing, and support data-driven quality improvement work.

### Respiratory disease management in primary care

Respiratory diseases, like asthma and chronic obstructive pulmonary disease (COPD), affect up to 9-12% of Albertans. These chronic diseases require lifelong management with medications as well as non-pharmacological treatments. Poorly controlled symptoms, as well as acute exacerbations, have negative effects on patient wellbeing and often result in emergency department visits or hospitalizations. As most of these patients are treated in primary care clinics, managing respiratory diseases effectively is a high priority among family physicians. To help meet these needs, our program of work in respiratory disease management in primary care includes events developed in collaboration with **AHS Medicine SCN** as well as the **Edmonton Southside PCN**, and the **Calgary Mosaic PCN**. Our multiple events addressed: the appropriate use of testing for diagnosis; screening, management, and referral for asthma and COPD; and smoking cessation.

## Management of lung disease in primary care

Studies show there are persistent issues with misdiagnosis and management of respiratory conditions in Canada, with 20-70% of patients with asthma and 70% of patients with COPD living in the community going undiagnosed. This multifaceted intervention provided clinically actionable data and educational resources to assist primary care providers in selecting the most appropriate lung test for diagnosing common respiratory conditions.

Both PLP offices collaborated with the **AHS Medicine Strategic Clinical Network (SCN)** and local **Primary Care Network (PCN)** partners (**Edmonton Southside PCN** and **Calgary Mosaic PCN**) to develop learning events addressing lung health and diagnosis of lung disease. To meet the needs of PCNs in each location, these events were tailored to the local context, resulting in related, yet distinct events.

### Mosaic “Data to Decisions” Event: Lung Health

A “Data to Decisions” event focusing on data driven practice improvement in lung health was co-designed by PLP Medical Directors **Dr. Katrina Nicholson**, **Dr. Oliver David**, and **Dr. Saadia Qaiser**, with Physician Leads **Dr. Yvonne Kangong**, and **Dr. Ali Chatha** from the **Calgary Mosaic PCN**, in partnership with the **Respiratory Health Section of the Medicine SCN** and the **Health Quality Council of Alberta (HQCA)**. The objective of this in-person event was for participating physicians and their healthcare teams to review physicians’ personal HQCA panel data report with a focus on COPD and asthma.

This event, hosted on April 26, 2023, had 80 registrants, 37 of whom were physicians. Respiriologist **Dr. Naushad Hirani** presented educational content on best testing practices. PLP Medical Directors **Dr. Nicholson**, **Dr. David** and **Dr. Qaiser** facilitated the event by reviewing data, sharing patient stories, and identifying relevant QI opportunities. After the event, there was a strong level of confidence expressed by the attendees who identified relevant opportunities for practice improvement and committed to a quality improvement project by using QI tools such as My Practice Improvement (MyPI), as well as Mosaic PCN QI tools. Physicians continue to be supported by the Mosaic PCN Practice Facilitators following-up on individual QI projects.



*This initiative is enhancing lung disease diagnosis and management in primary care, providing over 80 healthcare professionals with the tools and data needed to accurately identify and manage respiratory conditions, fostering significant improvements in patient care.*

## Breathe Easy: Choosing the right lung test for the right patient

Improper diagnosis of lung disease can result in inappropriate use of medications, increased urgent care utilization, and poor health outcomes. Confirmation of diagnosis with objective lung function testing is still often overlooked. Not all patients require a full Pulmonary Function Test (PFT) which includes spirometry, lung volume testing, and diffusion capacity. For example, suspected airway obstruction can be investigated using only spirometry testing, which is the gold standard test to confirm a diagnosis of COPD and a key component in the diagnosis of asthma. A full PFT may only be required for suspected Interstitial Lung Disease or other potentially restrictive forms of chronic lung disease.

This workshop was co-developed and organized in collaboration with the **Edmonton Southside PCN** and **Medicine Strategic Clinical Network**, with the aim of supporting primary care providers in identifying patients at risk for chronic lung disease and offering a useful guide for selecting the most appropriate objective lung function test for patients. The workshop was presented by **Dr. Ron Damant, Dr. Jacqueline Tay, and Dr. Katrina Nicholson** and with planning support from **Dr. Rose Yeung**. All registrants received copies of the recording, which is also available on our website to support ongoing spread and scale.

 **Breathe Easy: Choosing the right lung test for the right patient** - April 4, 2023

## Breathe Easy

70 participants 76 asynchronous viewings (to March 31, 2024)



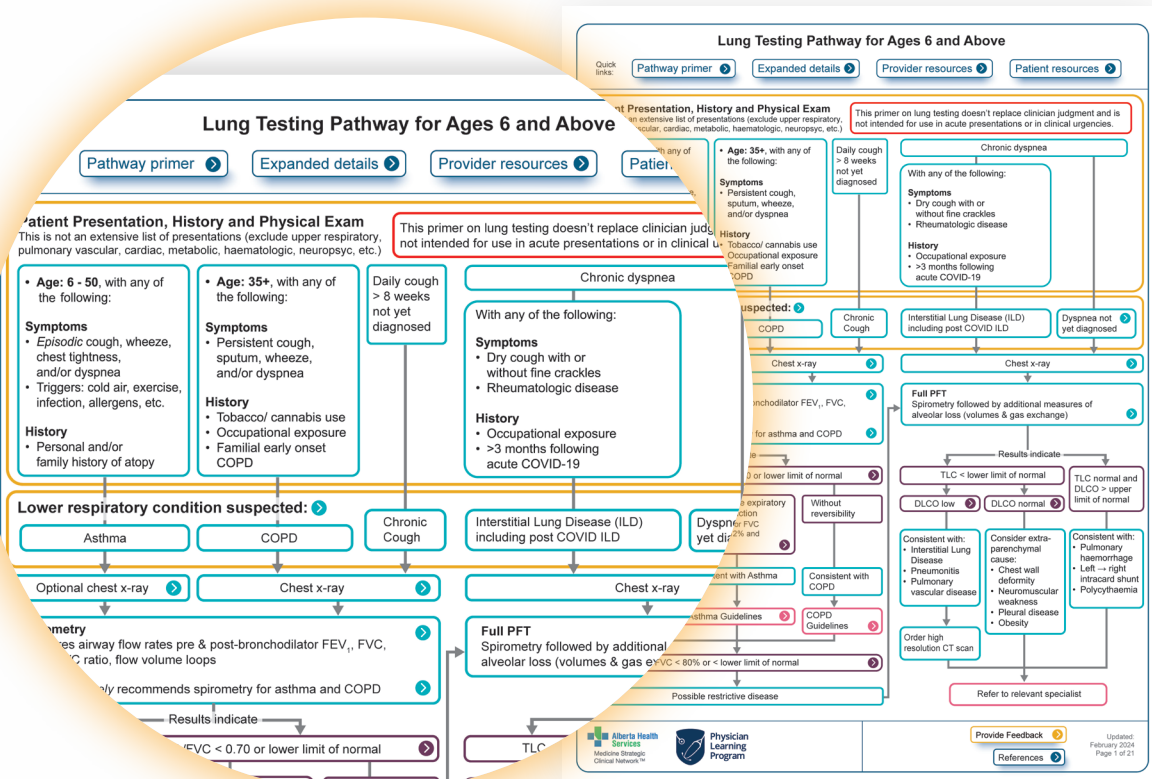
*This quality improvement workshop is helping to reduce low-value diagnostic testing in the primary care clinic, and has provided over 200 care providers with information on optimizing use of lung tests.*



## Lung testing flow map

PLP is committed to a human-centered design approach to enhance collaboration between family physicians and specialists. This combined effort involves co-design sessions aimed at testing and gathering feedback on a draft decision-making tool referred to as the lung testing flow map. The objective of this flow map is to assist family physicians in determining the most appropriate testing method, whether it be spirometry or a full pulmonary function test.

In close partnership with the **Respiratory Health Section of the Medicine SCN**, PLP is engaging with **Specialist Link** to ensure a seamless transition when the pathway is ready for launch. PLP worked with family physicians and specialists to design and validate several iterations of the lung testing flow map. The working group provided input, ensuring that the content and clinical flow align with the needs of healthcare practitioners. This map was completed in early 2024 and the project team is working to have the flow map uploaded and made available on Alberta's Pathway Hub.



Management of lung disease in primary care






*A lung testing flow map improves respiratory diagnosis accuracy and patient outcomes by guiding test selection.*

## A Breath Of Fresh Air: Updates in asthma and COPD in primary care

Two of the most common respiratory conditions, asthma and COPD, present a socioeconomic burden on the healthcare system and negatively impact patient health. Smoking worsens outcomes in patients and complicates disease management. Building off our work and participant feedback on **Breathe Easy: Choosing the right lung test for the right patient**, this webinar series reviewed the latest guidelines regarding the screening, management, and referral of asthma and COPD. The first of three sessions was completed this year, and the remaining two sessions are being presented in 2024-25.

Sessions were led by **Dr. Mohit Bhutani**, a Professor of Medicine in the Division of Pulmonary Medicine at the University of Alberta (UofA), with guidance of gaps in primary care by **Dr. Katherine (Kasia) Malczyk**, a family doctor from the **Leduc Beaumont Devon PCN**, and **Dr. Dayna Lee-Baggley**, a registered clinical psychologist who spoke about strategies to help patients with smoking cessation. The sessions feature aggregate **Northern Alberta Primary Care Research Network (NAPCRen)** data on patients' smoking status for clinics within Northern Alberta and a Pearls for Practice document to help physicians reflect on their practice and identify opportunities to advance their practice. All 331 registrants received copies of the recordings and the supporting resources, which are also available on our website for ongoing asynchronous learning.


-  **Diagnosis and management of asthma in adults in primary care**, March 19, 2024
-  **Targeted screening and management of COPD in primary care**, April 16, 2024
-  **How to help your patients quit smoking**, April 30, 2024

## A Breath Of Fresh Air

*Diagnosis and management of asthma in adults in primary care*

48 participants for the 1st webinar 15 asynchronous viewings (to March 31, 2024)



 *This learning series updated family physicians on diagnosis and management of Asthma and COPD and provided information on smoking cessation.*

## Physician reports for smoking status in COPD

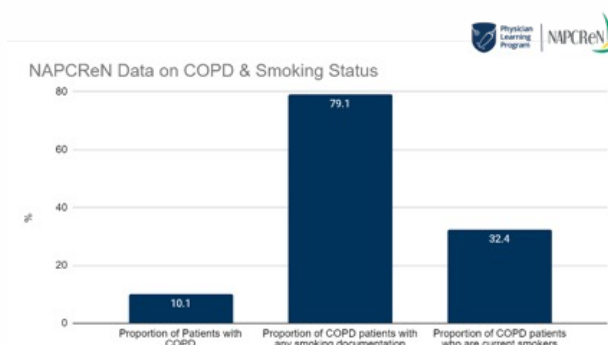
COPD is a progressive respiratory disease and a leading cause of morbidity and mortality, and is a leading cause of hospitalization, critical care stays, and readmissions. While there are a range of risk factors, smoking is the leading cause of COPD. Smoking cessation effectively reduces the risk of developing COPD, or stopping its progression, hence it is helpful to have smoking status documented in patient health records. Recent aggregate data from CPCSSN for 107,000 patients across 16 clinics in the NAPCReN zone indicates that approximately 10% of patients have COPD - of those, 32% of COPD patients are smokers, however, 21% of COPD patients do not have smoking status recorded in their health records.

As part of our expanding program of work on respiratory disease in primary care, PLP offered a webinar on smoking cessation, and also launched this new report as part of PLP-NAPCReN collaboration. This report helps health care providers understand the prevalence of smoking among their COPD patients and identify opportunities to update smoking status in their patient documentation. These reports provide individualized and benchmark comparison data on COPD and smoking status, to inform data-driven practice reflection, and to evaluate the impact of past practice changes, with the goal of improving patient outcomes. 69 participating physicians received these reports in March 2024, along with helpful resources for smoking cessation, including 2024 PLP webinars on **Targeted**



**screening and management of COPD in primary care (Dr. Mohit Bhutani)**, and **How to help your patients quit smoking**

**(Dr. Dayna Lee-Baggley)**. With another report cycle planned for next year, these data can also support providers' quality improvement cycles.



## Physician reports for use of asthma medications

Approximately 9% of Albertans are living with asthma. Managing the long-term control of this disease is important, and acute exacerbations require immediate treatment. Our ongoing PLP-NAPCReN project, led by **Dr. Donna Manca**, provides participating physicians with individualized and comparison data on asthma medication use, including short-acting bronchodilators, inhaled steroids, and systemic steroids (prednisone and/or decadron), and recommends additional resources to advance practice, including recent Global Initiative for Asthma recommendations and PLP webinars **Breathe easy: - Choosing the right lung test for the right patient**, and **Asthma gone wild** (featuring **Dr. Mohit Bhutani**). This report leverages our work last year to develop, test, and implement a case definition for asthma in CPCSSN. This year, 66 participating physicians received reports in March 2024, and a total of 324 reports have been distributed in the four years this project has been running, providing data that can support data-driven quality improvement cycles, and help improve patient outcomes.



*This annual report provides participating family physicians with individualized practice data on prescribing patterns for various asthma medications.*

## Development of an online cholesterol management tool

Cardiovascular disease is the leading cause of death for women and men and is widespread in Canada. High cholesterol, known as dyslipidemia, affects one in three adult Canadians and accounts for almost half the population-attributable risk of heart attacks and one-quarter the risk of stroke. Dyslipidemia can be modified with effective, safe, and inexpensive treatment using cholesterol-lowering medications, known as statins. However, only 30% of patients who would benefit from statins are taking these medications.

In collaboration with the **Libin Institute of Cardiovascular Health** and the **O'Brien Institute for Public Health**, PLP Medical Directors, **Dr. Sonia Butalia** and **Dr. Katrina Nicholson** are co-designing, implementing, and assessing a **dyslipidemia clinical decision support tool (Let's Talk Cholesterol)** for healthcare providers and patients.

With significant advancements in the proactive management of cholesterol, the tool launched on November 5, 2023, and quickly garnered attention. In the first 30 days, the tool logged over 1,526 users and 2,032 sessions. Since its launch, the platform has continued to captivate, amassing over 5,000 active users and more than 7,600 sessions.

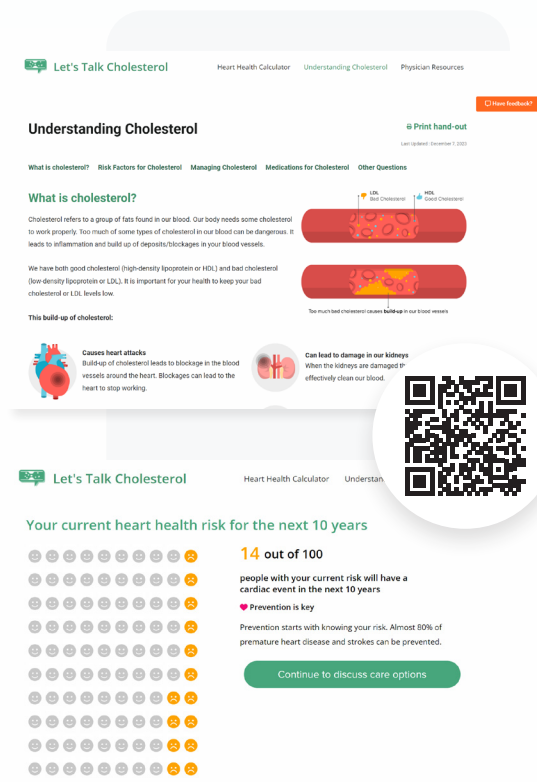
To further enhance its impact, a series of provincial and national presentations were conducted, aimed at promoting the importance and raising awareness of the shared decision-making process in cholesterol management. Feedback on this innovative tool and platform has been overwhelmingly positive, with recognition coming from across the province following presentations by Dr. Butalia at the following events:

- Butalia S. A co-created patient support tool for cholesterol management: Let's Talk Cholesterol at the meeting of the Canadian Diabetes Epidemiology Group - Montreal, QC on October 25, 2023.
- Butalia, S. Let's talk cholesterol: Co-Creation of Tools in the Digital Age. City Wide Endocrinology Rounds, University of Toronto, Toronto, Ontario on February 23, 2024.

This work was funded by **Diabetes Canada** with PLP providing expertise in human-centred design and technical development.



*This online tool is transforming cholesterol management in Canada, empowering over 5000 users to reduce heart disease and stroke risks effectively.*



Let's Talk Cholesterol online tool

## Osteoporosis treatment in primary care: What does local data show?

According to the AHS Fracture Liaison Services quarterly report (May 2023), 14.4% of patients were on an osteoporosis medication at the time of their fracture. In addition to pharmacotherapy as an important preventative measure, there are numerous other key factors to be considered when aiming to reduce the frequency of fractures in the frail and elderly population.

The **Geriatrics Update: Clinical pearls course** was held virtually on Sept 21-22, 2023, and was attended by 104 participants who care for complex older patients. Sessions included subject matter experts presenting on osteoporosis therapy and falls prevention. In conjunction with the conference sessions, PLP facilitated an interactive virtual workshop **Osteoporosis Treatment in Primary Care. What does local data show?** Forty-eight participants reviewed provincial aggregate level data from the Fracture Liaison Service and discussed approaches to fracture prevention for frail and elderly patients in their individual practice context. Post-event evaluation results indicated that the event was well received.

### Geriatrics Update: Clinical pearls course




*Clinicians caring for complex older patients attended PLP workshop to reflect on provincial fracture data and discuss best practices for osteoporosis management.*



## Managing depression and anxiety in the community: An integrated treatment approach

In Canada, one in five adults will suffer a will suffer a mental health disorder in their lives, with anxiety and depression being the most common. in their lives-anxiety disorders and depression are the most common. Approximately 10% of Canadian adults will have a depressive disorder. As individuals with depression and anxiety often seek primary care services at higher rates than other illnesses, this topic is a high priority for family physicians and their teams.

A more holistic approach to mental health management can be achieved by adopting a wellness model, including complementary use of alternative and integrative therapies which consider a review of the patient's mind, body, and social connections. The goal of this 2-part learning workshop was to help primary care practitioners incorporate an individualized wellness model of depression/anxiety management, where attention to the patient's subjective experience and unique relational dynamics within the doctor-patient setting is considered in addition to objective brain processes and symptomatic presentation.

Led by **Dr. Yakov Shapiro**, a clinical professor of psychiatry, at the UofA Integrated Psychotherapy/ Psychopharmacology Service (IPPS), and in collaboration with the **Edmonton Southside PCN**, relevant studies and case vignettes were used to illustrate the importance of shifting from the current disease-focused evidence-based treatments model to wellness-focused evidence-based principles of care, which provide the foundation for individualized mental health care provision in primary practice. Applications to both psychopharmacological and supportive therapy management were reviewed. The second session featured a panel with family physician **Dr. Sheela Duia**, mental health clinical educator **Megan Gauchier**, and exercise specialist **Rhiannon Jacek**. The recordings, as well as a **pearls for practice** resource document, are available on our website for ongoing spread and scale. 

### Managing depression and anxiety in the community: An integrated treatment approach


-  **Beyond DSM: Individualized medicine and integrated care**, October 2023
-  **Working as a community team: A case-based approach. Case presentation and panel discussion**, October 2023

## Depression and anxiety

104 participants total for the 2 webinars

132 asynchronous viewings (to March 31, 2024)



 *This workshop series for primary care focused on diagnosing and treating anxiety and depression from a wellness-focused perspective*





## Screening for hepatitis C in primary care

Hepatitis C virus (HCV) is a viral infection that affects the liver and can cause life threatening, chronic illness. HCV is spread through contact with infected blood, and can also be passed from an infected mother to her baby. There is no vaccine for HCV, but it can be treated with antiviral medications. Early detection and treatment can prevent serious liver damage and improve long-term health.

Approximately 1 out of every 150 Albertans are infected with HCV, but only half are aware of their health status. A 2019 study showed Alberta was previously on track to reach viral hepatitis elimination by 2030 (a goal of the World Health Organization), but healthcare setbacks during the COVID-19 pandemic impeded progress, as rates of HCV testing and treatment are 30% lower than pre-pandemic levels. In Alberta, routine prenatal screening includes HCV screening, but newcomers to Canada are not routinely screened for HCV.

To help increase hepatitis screening in primary care, a learning event was co-developed in collaboration with the **Edmonton North Primary Care Network**, **Dr. Matthew Rose**, a clinical professor at the UofA, and the Associate Medical Director at **Radius Community Health & Healing**, and **Dr. Molly Whalen-Browne** from the **New Canadian Health Centre**. This 2-part webinar series focused on providing education and resources to support family physicians and their teams in identifying at-risk populations, interpreting test results, and managing and referring patients for treatment. Over 140 people registered for the event, and received recordings of the event and the [pearls for practice](#) resource, which are available on our website to support asynchronous learning.

### Hit the Road, Hep C...and don't you come back no more...!

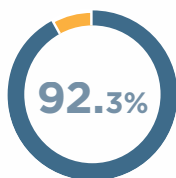
 **Screening in primary care**, February 28, 2024

 **Managing & referral in primary care**, March 6, 2024

## Hepatitis C

*56 participants total for the 2 webinars*

43 asynchronous viewings (to March 31, 2024)



Feel confident about implementing change in my practice



Was relevant to my practice



Met my learning needs



Helped me reflect on my practice







*To help increase screening for hepatitis C, this learning series focused on screening, managing, and referrals in primary care.*



## Concussion webinar series

Over 200,000 Canadians experience a concussion each year. Concussion symptoms can vary in severity and duration (lasting from a few hours to several months), and include physical, cognitive, emotional, and sleep-related symptoms. To help disseminate best practices for concussion recognition and treatment in primary care, the **AHS Population Health Promotion** team reached out to PLP and the Office of Lifelong Learning at the UofA to collaborate in planning and delivering a three-part webinar series in the Spring 2023, at the beginning of the spring sports season. These sessions included recommendations for concussion management and the latest protocols. In addition to primary care physicians, the webinar series was also relevant for community members including coaches and physical education teachers. A total of 691 participants attended the live learning events, and recordings and resources are available on PLP website to support ongoing spread and scale through asynchronous learning.

### Concussion: Overview and update


-  **Updates to pediatric concussion care: The living guideline for pediatric concussion care, Dr. Jennifer Dawson.** And,
-  **Improving concussion awareness and recognition in the community: Implications for physicians, Dr. Stephanie Cowle.** April 18, 2023.
-  **Concussion diagnosis and management: Utilizing the concussion awareness training tool, Dr. Shelina Babul,** April 25, 2023.
-  **When symptoms do not resolve: What are our options for patients with concussion symptoms? Dr. Constance Lebrun and Dr. Terry de Freitas,** May 2, 2023.

## Concussion

254 participants total for the 3 webinars

76 asynchronous viewings (to March 31, 2024)





 *This webinar series provides physicians and community sports coaches with information and online resources that support concussion diagnosis and treatment.*

## Household food insecurity webinar series

In Alberta, one in five households experience food insecurity, and the rate is almost three times higher for First Nations people living on reserves. People with chronic diseases or who struggle to access health care are also more likely to experience food insecurity, which is primarily driven by income challenges - in Alberta, 66% of households that rely on social assistance are food insecure. Food insecurity is linked to a range of

poor health outcomes, including diabetes, cardiovascular disease, chronic pain, oral health problems, as well as anxiety and depression, which increase health care utilization, particularly when food insecurity and resource constraints limit people's ability to manage chronic health conditions. Employment, relationships, and community participation are also negatively affected by food insecurity. For children living in food insecure households, the consequences in their education and well-being can last a lifetime. With increases in costs of groceries outpacing inflation in Canada in 2023, and expected to continue through 2024, food insecurity is an important topic for primary care physicians, due to its significant individual and social impacts.

In July 2023, the **Nutrition Services Provincial Strategy Team at Alberta Health Services** approached PLP and L3 to partner in developing educational activities focused on building understanding of household food insecurity within the Alberta context, and disseminate information to health teams, care providers, community groups and researchers on actions to support those experiencing household food insecurity. This partnership resulted in the co-development and delivery of a 2 part webinar series on household food insecurity to help physicians and their teams learn about food insecurity and the different resources and supports available for patients and families. Hosted in fall 2023, this two-part webinar series had 530 participants. Recordings of the events and associated resources are available on our website to support asynchronous learning.

-  **Navigating household food insecurity in primary care: A nutritional guideline.** November 21, 2023. Presented by: **Dr. Richard Lewanczuk, Kally Cheung, and Shawna McGhan**
-  **Strengthening foundations for patients facing household food insecurity: Experience of a primary care clinic.** November 30, 2023. Presented by: **Kally Cheung, Dr. Joseph Ojedokun, Lacey Smoole, and Shawna McGhan.**

## Food insecurity

240 participants total for the 2 webinars

99 asynchronous viewings (to March 31, 2024)



*This learning series presented information and resources to help healthcare teams, care providers, community groups, and researchers support people experiencing household food insecurity.*

## Enhancing breast, colorectal and cervical cancer screening rates: Rural virtual conference series

The Rural Virtual Conference is a weekly series of high-quality, online continuing professional development sessions, presented by clinical experts, PLP Medical Directors **Dr. Katrina Nicholson** and **Dr. Oliver David** and Physician Lead, **Dr. Joseph Ojedokun**, and offered by CME&PD at the UofC Cumming School of Medicine. Each presentation focuses on evidence-based information that is directly applicable to rural and remote primary care and hospital environments.


The **Enhancing Breast, Colorectal and Cervical Screening Rates in Primary Care: Part one of a two-part series** was delivered on March 5, 2024. Over 145 Albertan rural physicians and other healthcare providers attended. The two-part approach will focus on knowledge of and available resources for breast, colorectal, and cervical cancer screening clinical practice guidelines and an introduction to the HQCA panel reports.

Participants were guided along a self-assessment for practice improvement opportunities using MyPI, a QI tool developed by the Calgary PLP with CME&PD. Complimentary access to the MyPI tool was provided to all participants to complete a Physician Practice Improvement Plan (PPIP) cycle. The second session will take place in May 2024 with a focus on facilitated discussion reflecting on screening data and identifying practice change opportunities for implementation.







*Over 145 Albertan rural physicians and other healthcare providers participated in an evidence-based informative session about current provincial cancer screening guidelines.*

## Following the spark: Actionable strategies to untangle the complexities of neurodevelopmental disorders

Many neurodevelopmental disorders are interconnected with multiple related conditions. For example, Autism is often related to Fragile X, which is a rare condition that may be challenging to identify and diagnose for general practitioners. This educational series builds upon our past webinar series on **ADHD throughout the lifespan** including **pediatrics, adolescence, and adulthood** as well as our project on *Cognitive Task Analysis for Fragile X* . This project, led by our Medical Director, **Dr. Daniel Moreno de Luca** and in collaboration with **PRISMA, Autism Edmonton, and Planning Supports from Gateway Association** was designed to provide healthcare professionals with actionable strategies to untangle the complexities of neurodevelopmental disorders. The learning series was framed within the context of case-based discussions with particular emphasis on identifying strategies, theoretical knowledge, and actionable recommendations for care and understanding the family journey.

## Following the spark

-  **Recognizing, diagnosing, and caring for autism and neurodevelopmental conditions**  
**Dr. Lonnie Zwaigenbaum and Karen Kelm.** February 22, 2024.
-  **Precision medicine and genetic recommendations after a diagnosis of autism and neurodevelopmental conditions.** **Dr. Daniel Moreno De Luca and Karen Kelm.** February 29, 2024
-  **Navigating unique care needs across the lifespan: Perspectives in adult care and First Nations families.**  
**Dr Ade Orimalade, Dr. Prajjita Bardoloi, and Grant Bruno.** March 7, 2024
-  **Supporting individuals, families and care providers.** Panel Discussion with: **Dr. Lonnie Zwaigenbaum, Dr. Daniel Moreno De Luca, Dr. Ade Orimalade, Dr. Prajjita Bardoloi, Grant Bruno, Melinda Noyes, Morine Rossi, Betty Hahn-Sidor and Karen Kelm.** March 14, 2024

This four-part webinar series had a total of 320 participants, with all 792 registrants receiving links to the recordings and the Pearls for Practice document that contains key messages as well as links to tools and resources, which are also available for asynchronous viewing on both the PLP and Office of Lifelong Learning websites.

## Following the spark

320 participants total for the 4 webinars

128 asynchronous viewings (to March 31, 2024)



*This webinar series provided healthcare professionals with actionable strategies and recommendations so that they can better support patients and families with neurodevelopmental disorders*

## Obstructive sleep apnea (OSA) pathway

Sleep apnea care in Alberta has traditionally involved a specialist model that does not meet the patient care demand. Primary care providers face barriers to independent sleep apnea management due to gaps in knowledge and resources. The research team, led by PLP Medical Director, **Dr. Oliver David** and Physician Lead, **Dr. Sachin Pendharkar**, has documented these gaps and related factors in a pilot study involving primary care providers and other interested parties. A primary care pathway has been developed to shift treatment of certain patients into the community. Initial pathway rollout is complete; however, additional dissemination strategies are required to increase uptake and use.

Through a collaborative effort between PLP and the research team, progress has been made towards testing the current OSA Pathway. PLP provided in-kind human-centred design and technical development expertise. User tasks/personas for the pathway have been created and refined, and usability testing with family physicians will begin shortly. The usability testing will present users with a variety of tasks aimed to mirror real life scenarios where the OSA pathway could be used, and human centred design approaches will provide insights into their decision-making processes and identify areas for improvement. Upon completion of data analysis, the project findings will be disseminated to our external partners. Final launch plans for the pathway are under discussion, including provincial spread through **Specialist Link** and **Alberta Pathways Hub**.



*This primary care pathway for obstructive sleep apnea will improve patient access to care by equipping family physicians with the resources and knowledge needed to manage the condition effectively within the community.*

## **Advanced Quality Improvement PCN Partnerships - PLP collaboration for improvement projects partnership program pilot**

QI activities are important in health care, however, resources and supports vary across the healthcare continuum. To support physicians and their teams in carrying out QI projects, PCNs are hiring improvement facilitators (IFs) to direct QI work in clinics. While PCNs are tasked with supporting physicians and their teams in QI, they are under-resourced to do so, and the breadth of QI approaches used across the province impedes large scale projects. In response to this, and as part of our broader primary care strategy, PLP launched the Advanced Quality Improvement (AQI) PCN partnership pilot program, which aims to build QI capacity in communities, PCNs, and clinics through a sustainable infrastructure for QI support. Through the partnership, PCN staff are trained to become facilitators of Evidence-based Practice for Improving Quality (EPIQ) workshops and can deliver workshops internally to build QI capacity. Partnered PCNs also collaborate with PLP on a couple of joint improvement projects that are selected and managed within the PCN.

The pilot program initially launched in April 2023 and includes partnerships with three PCNs: **Chinook, Edmonton O-day'min, and Edmonton North**. In conjunction with the collaborative work, PLP is also undertaking an implementation evaluation, to better understand what resources and supports (beyond having QI skills and tools) are needed for successful quality improvement work in primary care. Using an implementation science approach, this evaluation will inform future modifications to the AQI program, and will allow PLP to better support PCNs and physicians and teams undertaking quality improvement within their clinics.

## Chinook PCN

To date, the **Chinook PCN** has trained over 80 staff in QI through 11 workshops offered at the network and clinic level. For Chinook, the workshops have helped standardize their QI language and reporting throughout their network, and developed foundational knowledge and skills for staff to conduct QI. Two PCN/PLP partnered projects have been developed as a result of the ongoing partnership: a network-level scale and spread project of a patient-facing tool to identify financial supports, and a clinic-level project to increase access and efficiency for patient form appointments.

## Edmonton O-day'min PCN

Beginning work in January 2024, the **Edmonton O'day-min PCN** identified PLP partnership as an opportunity to further build internal capacity and support the work of practice facilitators with clinics- 32 people completed QI training in January 2024. Two Partnered QI projects have been identified and are under development: a network-level project redesigning a referral tracking and reporting tool built into their EMR; and a physician-led clinic-level project to develop an annual review tool for patients with diabetes.

## Edmonton North PCN

The Edmonton North joined the partnership in January 2025 and has begun building internal capacity by sending 9 staff to become trained facilitators in January 2024. Workshops will be scheduled in near future and PLP staff will meet regularly with QI teams to further develop, implement, and support the identified partnered QI projects.



*These PLP-PCN collaborations are helping primary care networks build internal capacity for quality improvement work, and include partnered improvement projects being carried out over the next few years.*

## Physician reports for polypharmacy and sedative use in seniors

Patients who are taking ten or more medications (called polypharmacy) often experience poorer health outcomes. As part of our ongoing collaboration with **NAPCRen** and PLP Medical Director **Dr. Donna Manca**, this ongoing project distributes reports to participating physicians with practice data and resources to support patient care. Using updated data from CPCSSN, we provided individualized data and benchmark comparisons to physicians on their prescribing practices, along with information on managing insomnia and optimizing prescribing and deprescribing. Now in its fourth year, this project has distributed 325 reports since it launched, including 67 reports sent to physicians in March 2024, to inform data-driven practice reflection, and to evaluate the impact of past practice changes, with the goal of improving patient outcomes.



*This annual report provides participating family physicians with individualized practice data on prescribing patterns and non-medical treatments for treating insomnia in seniors*

## Physician reports for hypertension

High blood pressure, called hypertension, affects 20% of Albertans. Left untreated, hypertension is the leading cause of heart attacks, strokes, kidney injury, and vision loss. This hypertension report is part of our PLP-NAPCReN collaboration and is led by **Dr. Donna Manca**. It provides participating physicians with individualized and benchmark comparison data on the prevalence of hypertension among their patients, as well as the proportion of patients with hypertension who have had a blood-pressure reading in the clinic within the past 7 and 12 months. Resources recommended in the report included PLP's QI workshop **Mercury Rising! Optimizing blood pressure in diabetes**, and the associated **Mercury Rising! Pearls for Practice** document. Since its launch two years ago, we have distributed individualized reports to 151 physicians, including 69 in March of 2024, to inform data-driven practice reflection, and to evaluate the impact of past practice changes, with the goal of improving patient outcomes.



*This annual report provides participating family physicians with individualized practice data on hypertension prevalence in their panel, and recency of blood pressure measurements in the clinic.*

## The Alberta Back Care pathway journey map

Lower back pain significantly impacts patients' quality of life and increases healthcare utilization and costs. There are several challenges to addressing lower back pain. Notably, the reliance on opioids for pain management presents an undesirable risk of addiction. Limited access to affordable physiotherapy, inadequate physician training in alternative therapies, and time constraints on providing interventions hinder the delivery of effective, guideline-based interventions that meet patients' needs. The Good Living osteoarthritis in Denmark (GLA:D) back program addresses many of these issues and has introduced a sustainable evidence-based education and exercise regimen to address chronic and recurrent lower back pain.

Inspired by this European project, Professor of Rehabilitation Medicine **Dr. Greg Kawchuk**, aims to implement the GLA:D back program in PCNs across Alberta, through the Alberta Back Care pathway (ABCp) initiative, and assess its impact on physician management of lower back pain patients. To support the implementation of this program, Dr. Kawchuk collaborated with PLP to leverage our expertise in human-centred design approaches and develop a patient journey map for patients living with chronic back pain. The patient journey map illustrates patients' experiences with back pain, past treatments, and common issues or fear, and is intended to provide patients and physicians with information and context about the back pain treatment journey. Information collected through interviews and co-creation sessions with patients and physicians who specialize in back pain management indicated the benefits of the ABCp program for patients with chronic back pain. It also showed that, because of the long duration of chronic pain, patients tend to



experiment with different types of treatment. These findings informed the next stage of the project, where the ABCp project team, patients, and providers, co-developed journey maps that would visualize the ideal paths for managing chronic pain, focusing on identifying barriers and opportunities for action. These maps have been refined and validated with input and feedback from the rehabilitation team. Next steps will involve exploring the usability of the journey maps in the primary care context, to support program uptake among family physicians.



ABCp Back pain journey map



*This project is developing visual care pathways to support the incorporation of the GLA:D back program into back pain management in primary care settings in Alberta.*

# Supporting Continuing Care

## Appropriate prescribing of sedating medications to seniors

Choosing Wisely Canada (CWC) has identified de-prescribing of antipsychotics and sedative medications in seniors over the age of 65 years as a priority area for improvement. Antipsychotics and sedatives (e.g., benzodiazepines and z-drugs, like zopiclone) are commonly prescribed to seniors with dementia and other cognitive impairments to manage aggressive behaviours or insomnia. However, these medications carry many side effects that can reduce quality of life and introduce additional unwanted behaviors. Many of these drugs are also identified in the Beers Criteria® as having potentially adverse effects in older people, with sufficient clinical evidence to avoid prescribing when there is no indication for use.

## Appropriate prescribing of sedating medications to seniors in the Calgary Zone

Data from previous PLP projects with seniors' care health partners and the provincial *Appropriate Use of Antipsychotics initiative* have identified significant regional, site and individual physician practice variability in prescribing of sedating medications to older Albertans.

This project will provide individual physicians with data on their prescribing practices of sedating medications to those aged 65+, with no diagnoses of schizophrenia or Huntington's chorea, who were residing in long-term care and/or designated supportive living sites in the Calgary Zone from January 2018 to December 2023. Additionally, this project will provide aggregated zone and/or site level data, intended to facilitate discussions with physician peers and health teams about contextual factors which may influence variations in care and identify change or improvement ideas.

In 2023-2024, PLP completed the foundational work of developing a data algorithm for this project to proceed with PLP Medical Director, **Dr. Douglas Woodhouse** and Physician Lead, **Dr. Quail** and the **Calgary Frail Elderly Alternative Relationship Plan (ARP)** group. The data algorithm is being updated and refined, and consenting physicians will receive their individual data reports with peer comparators in 2024-25.



*Appropriate prescribing of medications is critical to minimize the potential harms certain drugs can have in older adults.*

## Assessing the variation in antipsychotic, antidepressants, and sedative prescribing to seniors: A pan-provincial review of low-value prescribing in Alberta and Saskatchewan

Overprescribing, or inappropriate prescribing, can predispose seniors to increased risk of falls, fractures, delirium, and other adverse events. Recently, CWC and the Canadian Institute for Health Information (CIHI) reported significant chronic use of benzodiazepines and other sedative-hypnotics across eight provinces in Canada. There was significant regional variation in overuse of benzodiazepines and other sedative-hypnotics in older adults, with some provinces being as high as 20% (Saskatchewan 5%, Alberta 10%). Further evaluation of practices in Saskatchewan and Alberta may inform how other jurisdictions could improve.

To date, the analysis shows important trends in overprescribing of these medications, including differences in prescribing patterns based on gender and location. Women were prescribed these medications at 1.7 times the rate compared to men, and those living in rural areas were 10% more likely to be prescribed these medications compared to those living in urban settings.

PLP is sharing the data analysis algorithms with **Choosing Wisely Alberta** and **Choosing Wisely Saskatchewan** to explore interprovincial variation. Findings will also be shared with interested parties including the **AHS Provincial Seniors Health and Continuing Care** and **CWC** to better understand the clinical practice variation and identify future opportunities to support quality improvement initiatives. This work is being led by PLP Assistant Dean, **Dr. Kelly Burak**, PLP Medical Director, **Dr. Douglas Woodhouse**, Physician Lead, **Dr. Patrick Quail** and with **Jason Vanstone**, PhD.



*Appropriate prescribing of medications is critical to minimize the potential harms certain drugs can have in older adults. Between 2021 and 2023, 177,943 (1 in 3) seniors in Alberta were prescribed an antidepressant, antipsychotic, or sedative potentially inappropriately. We have identified areas in Alberta where targeted quality improvement initiatives could reduce adverse drug effects for our seniors improving their quality of life.*

# Supporting Cardiology

We are pleased to provide an update on our cardiology pillar, which is currently focused on preventing second heart attacks

## Assessing adherence to secondary prevention guidelines following myocardial infarction for patients discharged from the Mazankowski Alberta Heart Institute

Approximately 20% of people who have a heart attack (i.e., a myocardial infarction - MI), are likely to experience another cardiovascular event within a year. The American College of Cardiology and the American Heart Association (ACC/AHA) provide comprehensive prevention guidelines to prevent recurrence of MI. These guidelines include lifestyle modifications, medication adherence, and comprehensive follow-up care for management of comorbidities and psychosocial factors. The involvement of multidisciplinary teams for follow-up and education for patients and their families is also recommended. This PLP program of work was aimed at assessing adherence to secondary prevention guidelines for post-discharge MI patients, and understanding the contextual factors that impact adherence. The overarching goal was to improve patient engagement, enhance educational resources, refine clinician tools, and optimize secondary prevention strategies by integrating this data with primary care information. The key partners and physician leads were **Dr. Robert Welsh** and **Dr. Pishoy Gouda**, cardiologists from the **Canadian Vigour Centre** at the UofA Faculty of Medicine and Dentistry. This program of work includes two concurrent projects.

### Assessing adherence to secondary prevention guidelines following myocardial infarction - pharmacotherapy

This initial project involved a detailed data analysis of approximately 4,000 patients discharged from the Mazankowski between 2011 and 2016, to identify patterns of adherence and non-adherence to the ACC/AHA guidelines among discharged patients. Overall, findings showed that about half of the cohort did not adhere to the pharmacotherapy as recommended by the ACC/AHA.

### Understanding contextual factors for secondary prevention of myocardial infarction in primary care following MI for patients discharged from the Mazankowski Alberta Heart Institute

This project is exploring the contextual factors that influence adherence or non-adherence to guidelines. This examination was guided by the understanding that prevention of subsequent heart attacks is multifaceted, involving not only medical and lifestyle adjustments but also the management of comorbidities, psychosocial aspects, multidisciplinary team involvement, and the evaluation of socioeconomic and health system factors, which happens in the primary care space. In partnership with PLP Physician Liaison **Dr. Terrence McDonald**, PLP is analyzing key contextual data including geospatial information to measure distance to clinic, physician characteristics and continuity of care and healthcare utilization among patients based on their adherence to secondary prevention medications.



*The findings from this program are expected to enhance the body of knowledge on secondary prevention post-heart attack, and foster improvements in patient care practices at the Mazankowski Alberta Heart Institute, ultimately aiming to decrease the likelihood additional heart attacks.*

## Supporting Critical Care

Critical care is a resource-intensive environment where expensive drugs, complex technologies, and highly specialized care represent a large component of our health care expenditures. Our work in this area supports a sustainable health care system. PLP is working with critical care physicians across the province on initiatives addressing low-value blood use, avoidable dialysis, and other clinical improvement objectives. PLP is an essential partner in critical care-focused projects with the Critical Care SCN and physician researchers using eCritical and Connect Care. These projects are mostly funded by Partnership for Research and Innovation in the Health System (PRIHS), which is co-sponsored by Alberta Innovates and AHS. Collectively, these projects present substantive opportunities to improve value and quality of care.

### Optimizing safe and effective use of human albumin solutions in critical care in Alberta

Albumin is a protein made by the liver that helps keep fluid in the bloodstream; however, it is overused in many clinical settings. Physician Lead, **Dr. Daniel Niven** and PLP Medical Directors, **Dr. Selena Au** conducted sessions at 16 adult intensive care units (ICUs) in Alberta with the goal of reducing the use of low-value albumin.

PLP co-developed a Tableau data dashboard with the **Critical Care SCN** and **eCritical** and **Connect Care** to sustain the success of this intervention. The improved clinical practice, reduction in low-value albumin use, has been sustained with no additional resources or active intervention.

The interventions for this project are complete and with no additional resources expended. In 2023-24, approximately 400 fewer patients received low-value albumin reducing costs and biomedical waste.



*Since its inception, this initiative has prevented more than 4,000 patients from receiving an unnecessary blood product, prevented 3,766 kg of biomedical waste from being generated and saved more than \$1,200,000. This project will continue to generate benefits to the health system as improvements have been sustained with no further efforts.*

# Dialyzing Wisely: Improving the delivery of acute dialysis to critically ill Albertans

Approximately 10% of critically ill patients receive dialysis, and these rates have been growing by more than 10% each year. Recently published evidence from the Alberta-led STARRT-AKI trial found that early initiation of dialysis increases the chance that a patient will require life-long dialysis. Preliminary findings suggest that up to 59% of acute dialysis could be deemed early or inappropriate starts. These data highlight a significant opportunity to avoid life-long dialysis, resulting in improved quality of life and potential cost savings by implementing interventions to optimize use of dialysis at the 21 adult and pediatric ICUs across Alberta.

PLP Medical Director, **Dr. Selena Au**, Physician Lead, **Dr. Oleksa Rewa**, and the **Critical Care SCN** developed A&F reports as one component of a multi-faceted intervention aimed at aligning physician practice with best evidence for use of dialysis.

PLP has supported **Dr. Oleksa Rewa** and the **Critical Care SCN** in data analysis and visualization, using human-centred design expertise to develop site-level aggregate reports on three clinical topics: dialysis initiation criteria, continuous dialysis utilization, and intermittent dialysis utilization. To date, the project has launched at 17 sites across three health zones: Calgary, Edmonton, and Central. In 2023-24, six of these sites received quarterly A&F reports that had an audience of 94 physicians and 1,035 allied health and management professionals.

PLP will continue to support rollout to the remaining four sites across the province (including North and South Zone) and develop aggregate-level data reports every three months to launched sites. This project has the potential to avoid the use of life-long dialysis resulting in improved patient quality of life and system benefits.

Results	Baseline	Current	Benefit
Provincial adherence to evidence-based acute RRT initiations	40%	52%	Improved patient outcomes
CRRT days/year	4,700	3,373	~\$1.2M savings
Avg. CRRT days/patient	6.4	5.4	
# of patients who received CRRT	734	625	~1.1M cost avoidance of chronic dialysis
Filter life hours	30	34	\$70,000 savings

Dialyzing Wisely -  
Improving the delivery of acute dialysis to critically ill Albertans



To date, *Dialyzing Wisely* has seen an estimated cost savings of ~\$2.4 million achieved by reducing continuous renal replacement therapy (CRRT) days, avoiding chronic dialysis, and extending filter life hours. The initiative has additional potential to prevent the need for lifelong dialysis for more than 34 patients over the lifetime of the project, a therapy that costs \$100,000 a year/patient.

# Don't Misuse My Blood: Reducing avoidable blood tests and blood transfusions in patients admitted to critical care and high-risk surgical units in Alberta

Physician Lead, **Dr. Daniel Niven**, the **Critical Care SCN**, and PLP Assistant Dean, **Dr. Kelly Burak** are collaborating on an initiative to reduce unnecessary blood testing and transfusions of five blood products at all 41 adult and pediatric ICUs, cardiovascular ICUs, critical care units, and high-risk surgery and trauma units across the province.

## Reducing avoidable blood transfusions

Baseline data analysis shows that upwards of 17% of red blood cell transfusions, 39% of plasma transfusions, 44% of platelet transfusions, and 50% of fibrinogen prescriptions are potentially inappropriate.

This year, PLP supported project rollout sessions at 28 sites across four health zones with five facilitated audit and group feedback sessions. These sessions and reports were attended by 226 physicians and 1,018 nursing staff and site managers in 38 meetings. PLP continues to support generating bimonthly audit and feedback reports and have begun supporting development of a data dashboard that will be used by the Critical Care SCN to monitor and evaluate project outcomes.

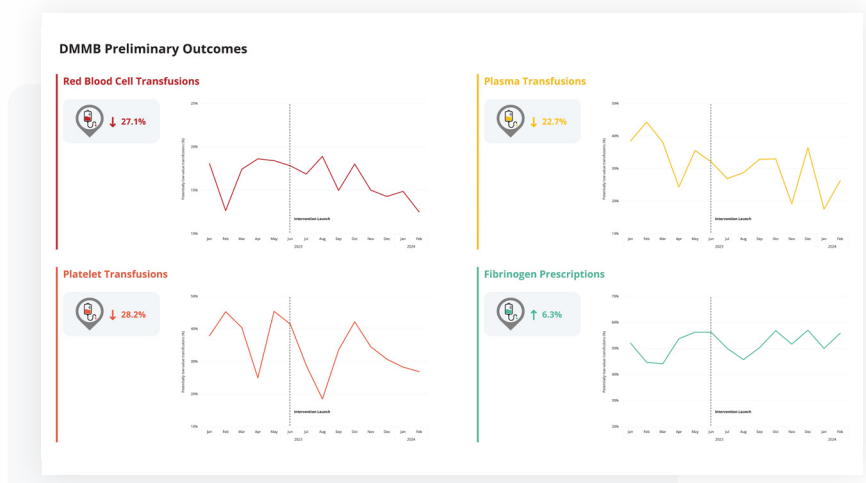


*Implementing an intervention that improves appropriateness of care has the potential to eliminate over 4,500 unnecessary transfusions per year; reducing unnecessary exposure of patients to blood products and having potential cost savings of up to \$2.6 million per year.*

## Reducing avoidable blood tests

PLP and the **Critical Care SCN** are collaborating on the planning and development of the upcoming roll out for reducing unnecessary blood testing.

In collaboration with **Dr. Niven** and Chel Hee Lee, a senior biostatistician from the **Department of Critical Care Medicine (DCCM)**, PLP provided analytic support and consultative expertise to analyze pre-intervention



Don't Misuse My Blood: Reducing avoidable blood tests and blood transfusions in patients admitted to critical care and high-risk surgical units in Alberta



lab ordering. Preliminary results show that lab utilization varies by critical care unit type – average total tests per patient per day: adult cardiovascular ICUs 10 tests, adult and pediatric ICUs 8-9 tests, and coronary/cardiac ICUs 6 tests. The baseline data indicates there may be significant opportunities for improvement, with significant clinical variation between sites and many unnecessary routine or repeat tests being performed. PLP will continue to provide consultative support to identify practitioner actionable metrics for use in audit and feedback reporting.

PLP is also working with the **Critical Care SCN** on the planning and development of the upcoming multi-component educational interventions and site roll out sessions to support reducing unnecessary blood testing. This project has the potential to optimize the use of blood transfusions and lab testing which will benefit patients and the system.



*Reducing low-value blood testing is expected to generate savings of \$800,000 per year and liberate capacity in the system amounting to \$5.7M annually, freeing lab testing capacity, and preventing patients from requiring blood transfusions due to frequent blood draws.*

## Organ donation

Transplantation is the optimal treatment for end-stage organ failure and is considered both lifesaving and cost effective. In 2021, **Alberta Health** funded the **Specialist in End-of-Life Care, Neuro-prognostication, and Donation (SEND)** program. The role of SEND physicians is to support critical care and emergency services in identifying potential organ donors as part of quality end-of-life care. The SEND program also conducts QI which includes a systematic review of all ICU and ED deaths in Southern Alberta to assess for missed organ donation opportunities, donor management adherence, and transplantation as outcomes.

In response to the QI initiatives, PLP Medical Director, **Dr. Selena Au** and Physician Lead, **Dr. Andreas Kramer** assisted the **SEND program** with the creation of site-level audit and feedback reports. By incorporating data visualization best practices, these reports highlight key, site-specific performance metrics—including total eligible for organ donation, total missed opportunities and referral and approach rates. The goal of this project was to assist the **SEND program** in providing healthcare teams with the necessary information to lead difficult conversations and empower physicians to feel they are approaching all eligible patients and families.

On a quarterly basis, 25 SEND physicians supporting 16 sites receive the site-level reports generated from this project. The main audience for these reports has been critical care physicians/medical directors with outreach to emergency departments when a potential organ donation opportunity has occurred, or a QI opportunity has been identified.

These reports were iteratively designed by PLP in collaboration with the **SEND program** and have been well received. Feedback shows they are easy to understand and allow for physician engagement. The visualization of trends, comparison to peer groups, and impact on organs donated have been important additions within the evolution of these reports. QR links also allow for easy access to additional resources. With the completion of provision of reports to highlight site-level performance data surrounding organ donation, this project is now completed and closed.



*On a quarterly basis, 25 SEND physicians supporting 16 sites receive the site-level audit and feedback reports generated from this project.*

## Calgary Zone department of critical care medicine physician practice metrics dashboard

PLP Medical Director, **Dr. Selena Au**, in collaboration with **Calgary Zone Department of Critical Care Medicine (DCCM)** and **AHS eCritical**, are developing three individual-level, practice metrics dashboards on the topics of post-cardiac arrest temperature management, readmission, and extubation. By January 2024, these dashboards were rolled out and used in conjunction with DCCM QI rounds, led by **Dr. Au**, where physicians and their teams reflected on their individual and site-level practice data and make action plans in a group setting. These dashboards will provide critical care physicians with timely access to individual practice data, supporting practice change and quality improvement initiatives.

In June 2023, PLP developed and delivered a comprehensive dashboard blueprint to eCritical, encompassing user-tested data metrics, visualizations, and data parameters. The post-cardiac arrest temperature management (November 2023) and extubation (March 2024) dashboards have been successfully launched and integrated into the DCCM QI Rounds. The third dashboard, aimed at addressing readmissions, is slated for release in May 2024. On average, each QI Rounds session sees participation from 30 healthcare professionals, including physicians, nurses, and allied health staff. PLP conducts surveys to gather feedback about these sessions, and about 80% of the respondents reported being likely to modify their clinical practice based on the insights provided by the dashboards. Moreover, approximately 90% of participants believe that the review of dashboards during QI Rounds is effective and support its continuation.



*This project offers a roadmap for how physicians and teams can elevate clinically important metrics in a dynamic quality improvement program that includes individual data to support practice reflection.*

# Supporting Diabetes and Obesity Care

PLP has an extensive program of work supporting clinical improvements in diabetes and obesity care, and we benefit from a strong team of house experts, including Drs. Darren Lau, Rose Yeung, Donna Manca, and Denise Campbell-Scherer, as well as strong partnerships in the health care system. This year, our projects seek to understand the impact on continuity of care on diabetes, assist patients using continuous glucose monitors, test and validate a diabetes case definition, and promote the use of diabetes medications that help protect organ function. We have also provided family physicians with individual practice data and resources to improve care for patients living with obesity and diabetes.

## Physician reports for diabetes management

Approximately 8% of Albertans are living with diabetes, which is associated with complications such as heart disease, chronic kidney disease, nerve damage, and problems with feet and vision. To help participating physicians advance care for their patients with diabetes, PLP and NAPCReN distribute an annual report featuring individualized data and benchmark comparisons for relevant metrics, including the prevalence of diabetes within their patient panel, measures of glycemic control, weight, BMI, and blood pressure information. Led by **Dr. Donna Manca**, this reporting project is in its fourth year, and has distributed 325 reports featuring CPCSSN data since its launch, including 67 reports in March 2024. In addition to individualized data that can inform data-driven practice reflection, this report also recommended a number of helpful PLP webinars and resources, including: **Remission is possible: A new way to think about type 2 diabetes, Ketogenic diet for diabetes and weight management (and the associated Pearls for Practice document), and Toe-morrow never dies: Approach to the diabetic foot.**

As kidney disease is often comorbid with diabetes, we also distributed a second report with individualized and comparison data regarding the prevalence of diabetes and CKD in the physician's panel, as well as the extent to which diabetes medications that can help protect organ function (SGLT2 inhibitors) are being prescribed. The diabetes and CKD report also linked to helpful resources, including PLP webinars **Diabetes and Chronic Kidney Disease, and Remission is possible: A new way to think about type 2 diabetes.** Now in its second year, we distributed the Diabetes and CKD reports to 67 physicians in March this year, and a cumulative total of 149 physicians since this report launched.



*This annual report provides participating family physicians with individualized practice data on the prevalence of diabetes, related comorbidities, and measures of disease management in their panel to help advance patient care.*

## PLP efforts to advance obesity care.

The CPCSSN is a multi-disease surveillance system of electronic medical records, which features the Edmonton Obesity Staging System in a dashboard data-presentation tool (EOSS-DPT), supporting primary care physicians in caring for patients with obesity. The principal investigators on the grant to develop the dashboard were **Dr. Donna Manca**, Dr. Denise Campbell-Scherer, and Dr. Rose Yeung. Building on the work of the dashboard, PLP and **NAPCRen** developed physician reports for the (EOSS-DPT). This year, reports were sent to 69 physician sentinels in March 2024, and a total of 327 recipients since this reporting project launched four years ago.

The physician reports for the EOSS dashboard include resources to assist and inform primary care providers on obesity management, and aim to support physicians in caring for their patients living with obesity. Helpful resources included links to the **2020 Canadian Obesity Guidelines** (“Obesity in adults: a clinical practice guideline”) and our extensive webinar series on the guidelines. **PLP Co-Lead Dr. Denise Campbell-Scherer** was an executive member and co-author of these obesity guidelines, which have been downloaded more than 432,888 times to date and cited 646 times in other academic work, have informed 8 policy documents (including the World Health Organization), and were adapted and implemented in Ireland and Chile last year. In 2022, we partnered with L3 at the UofA to launch an accompanying virtual 5AsTeam (5AsT) training program to support physicians and interdisciplinary teams in advancing their skills in the management of obesity and type 2 diabetes. L3 and PLP continue knowledge transfer of the Alberta Innovates CRIO 5As Team project, led by Dr. Denise Campbell-Scherer and Dr. Arya Sharma. The **5AsT primary care tools** provide a foundation for the obesity course, and have now been translated into 5 languages and downloaded in 53 countries.



*This report provides participating family physicians with information on using the CPCSSN dashboard tool to identify patients living with obesity and other comorbidities, and provided additional resources to support patient care*



## Understanding type 1 diabetes in Alberta by applying a case definition to administrative data

Type 1 diabetes (T1D) and type 2 diabetes (T2D) are very distinct conditions that require different diagnostic and management considerations. Much of the quality improvement and surveillance work that has been done has focused on T2D, because it represents 85%+ of all diabetes cases. T1D represents about 5-10% of all diabetes cases, and is unique because it is an autoimmune condition leading to insulin deficiency, which requires affected individuals to inject insulin multiple times daily or use an insulin pump 24 hours a day to survive.

Unfortunately, little work has been done in Canada to accurately identify T1D at the population level for healthcare resource planning and quality improvement. This gap in accurately identifying and differentiating T1D from T2D in administrative data makes it difficult to understand the true prevalence and healthcare needs of those with T1D. Addressing this gap is crucial, especially as projections indicate rising T1D prevalence and the associated unique medical needs of this population. In response to this, **Dr. Rose Yeung**, in collaboration with **Dr. Peter Senior** and **Dr. Padma Kaul**, have initiated this study to identify and differentiate Albertans living with type 1 from type 2 diabetes across Alberta.

Working with a published algorithm (or case definition) for identifying and distinguishing people with T1D, this PLP-partnered study is testing and validating that algorithm in multiple administrative health datasets and electronic health records to assess its performance with respect to effectiveness, sensitivity, and predictive accuracy. If the findings are that the algorithm is valid and reliable for differentiating among individuals with type 1 and type 2 diabetes, results from this study would address the existing gap, and would allow policy makers, clinicians, and the diabetes community to better understand the distinctive clinical needs and quantify the burdens experienced by people living with T1D across the province to better allocate healthcare resources and clinical messaging.



*By better identifying people with type 1 diabetes, we can improve healthcare planning and ensure they get the specific care they need.*



## Diabetes continuity of care

Managing chronic conditions such as T2D often involves transitions across various healthcare settings—ranging from community-based care to hospital admissions and back. The involvement of primary care physicians (PCP) in routine management of chronic conditions helps to ensure continuity of care and improve health outcomes for patients.

In collaboration with PLP Physician Liaison **Dr. Terrence McDonald**, who is leading the project, and PLP team including **Drs. Nonsi Mathe, Darren Lau, Donna Manca, Denise Campbell-Scherer, Rose Yeung,** and **Nandini Desai** this project examined

the health outcomes and healthcare utilization of over 200,000 patients living with diabetes (PLWD) who are under the care of community primary care physicians. Using administrative health records, the study assessed the geographic distribution of PLWD, the frequency of visits to their PCP, and the impact of continuity between PCP and community primary care clinics on patient health outcomes. Comparisons between rural and urban PLWD showed that although urban patients had more PCP visits, they tended to change providers more often than rural patients.

Patients, including those who are the most medically complex, who always saw the same doctor or received care from the same clinic team had significantly fewer emergency department visits and hospital stays. These results demonstrate that patients who see the same doctor or clinic team regularly have better health outcomes. This project underscores the critical role of continuity in care for managing diabetes effectively. These findings advocate for policies and practices that promote continuous care relationships, particularly for PLWD in both rural and metropolitan settings.

This study is being presented at the Canadian Association for Health Services and Policy Research (CASHPER) in May 2024.



*This project demonstrates the critical role of continuity in care for managing diabetes effectively, with better health outcomes and significantly lower health care utilization observed among patients with continuity of care.*



Continuity of care graphic



# Development of resources to support continuous glucose monitoring in adults with T2D.

In diabetes management, behavior modification that emphasizes improved nutrition and physical activity remains the primary therapy for adults with T2D. However, a significant breakthrough has made the tool's utility and longevity in medical therapy with the advent of continuous glucose monitoring (CGM) via wearable sensors. These devices continuously sample interstitial fluid glucose, eliminating the need for painful finger poking associated with traditional capillary blood glucose monitoring. Notably, CGMs collect data passively every few minutes, proving particularly beneficial when patients cannot conduct finger poke testing, such as during sleep. Clinical trial data continue to affirm the effectiveness of CGM in improving glucose levels and reducing life-threatening hypoglycemia.

As these technologies rapidly evolve, a pressing need persists to develop educational materials for clinicians and patients that facilitate optimal utilization of CGMs. To address this gap, PLP has undertaken a project employing human-centred design approaches to develop and test tailored support materials as a tool for patient education. In the past year, significant progress has been made to understand existing information and what is needed by patients living with T2D. However, manufacturer updates to the physical CGM sensor device prompted revisions to the support tool, to ensure alignment with the latest patient instructions. User testing with participants through human-centred design interviews facilitated final adjustments to maximize the tool's utility. Subsequently, the **How to read my AGP** (Ambulatory Glucose Profile) tool has been reviewed, approved for distribution, and made available online.

A follow-on knowledge transfer project to support the dissemination and implementation of the tool among relevant stakeholders is underway.

This work, which leverages PLP's human centred design expertise, has been carried out under the direction of the Diabetes research team and PLP medical directors, **Dr. Darren Lau, Dr. Rose Yeung, and Dr. Donna Manca.**



*This patient education resource will help people living with diabetes better manage their condition when using a continuous glucose monitor.*

**How do I read the AGP?**  
The Ambulatory Glucose Profile (AGP) shows your blood glucose readings over the last 7, 14, 30, or 90 days. We suggest using the 7 day AGP to review weekly.  
The dark line shows the median, or the middle number, of all the sensor readings at that time of day. Half of the numbers are above this line and the other half are below this line.  
The dark blue shaded area, which looks like a river, is the spread of your blood glucose 50% of the time.  
The lighter blue/grey area is the spread of your blood glucose 90% of the time.

**Step 1: Are your numbers within target range?**  
Most people with diabetes should aim to keep blood glucose between 3.9-10mmol/L more than 70% of the time.

**Step 2: Are there low blood glucose trends?**  
The first goal is to get rid of any low blood glucose (hypoglycaemia) patterns.  
What is causing the blood glucose to drop?  
- Missed medication or wrong?  
- Physical activity?  
- Insulin?  
- Illness?  
- Stress?  
- Or something else?  
How can you prevent low blood glucose?

**Step 3: Are there high blood glucose trends?**  
What is causing the high?  
- Missed medication?  
- Specific foods? Portion size?  
- Physical activity?  
- Stress?  
- Illness?  
How can you prevent high glucose?

**Step 4: Is there glucose variability?**  
More variability on your AGP means your blood glucose changes a lot from day to day. Look for the widest parts of the blue shaded area.  
What is causing the variability?  
- Different types of foods on different days?  
- Changing medication dosage or timing?  
- Different kinds/times/timing of physical activity?  
- Other e.g. work schedule? Stress? Hormones?  
The goal is less variability.

**Step 5: Pick 1 thing to work on for a week**  
Take a screenshot of your 7 day AGP this week and compare it to next week. Did your weeks go as you planned?  
Make it a habit!  
- Reviewing your AGP every week can help you make the most of your CGM.  
- Make small changes that you can maintain, to build confidence and slowly get your blood sugars more in target.  
If you are having trouble reaching your targets, please contact your health care provider.

How to read my AGP guide



## Understanding type 1 diabetes lived experience through patient and clinician co-designed research: The reshape T1D study

A multi-pronged project, led by doctoral student **Jamie Boisvenue** and supervised by PLP Senior Medical Director **Dr. Rose Yeung**, the Reshape T1D study explores how individuals living with T1D interact with healthcare systems in Alberta for diabetes, and PLP is one of many partners on the project.

This project uses participatory action research approach and included people living with T1D and clinicians working in T1D care settings as co-researchers. The Reshape T1D study has assessed questions that are directly relevant to clinicians for improving clinical practice. The qualitative study highlights how clinicians can incorporate person-centred approaches in clinical practice to improve access to equitable, safe, and empathetic clinical care for people living with T1D. The research team co-developed the Type 1 Diabetes Lived Experiences Framework for Clinical Quality Improvement and a list of actionable recommendations for clinicians to use to inform clinical practice. These findings have already informed health policy on various areas of diabetes care including nutrition and Alberta's Insulin Pump Program. This work includes an arts-based knowledge translation project, curated by a local Edmonton artist who lives with T1D with direct experience on the study's phenomena of interest. The art collection, which has already garnered national attention, will include 10-12 pieces and will be unveiled at this year's Strategy for Patient Oriented Research Collaborative Forum 2024 and Diabetes Action Canada Workshop.



*This project will support quality improvement initiatives by providing helpful information on how people with type 1 diabetes are engaging with the healthcare system in Alberta.*



## Promoting the use of medications with heart and kidney benefits in Alberta

One class of medications being used to treat diabetes are the Sodium-glucose co-transporter-2 inhibitors (SGLT2i). First introduced to Canada in 2014, clinical trials later demonstrated they have important benefits for the heart and the kidneys, in addition to glucose control in diabetes. In past years, PLP Diabetes Team has delivered educational webinars to help providers understand the new indications for SGLT2i, as well as how to increase the number of people who are using these medications. We have also studied the reasons why people who may benefit from SGLT2i are not prescribed or are not taking them.

This year, both PLP offices have been involved in this project with the **Alberta Health Services Medicine Strategic Clinical Network (Kidney Health Section)**, which aims to increase the appropriate use of SGLT2i among people living with diabetes. Collaboratively, PLP Medical Directors, **Dr. Katrina Nicholson, Dr. Rose Yeung, and Dr. Darren Lau**, along with Physician Lead, **Dr. Louis-Philippe Girard**, and the Calgary PLP human centred designers have contributed to the provincial clinical pathway **Chronic Kidney Disease in Diabetes Mellitus 2 (CKD in DM2) Primary Care Pathway for Optimizing Kidney and Cardiovascular Outcomes** to help providers optimize medications for adults with diabetes and chronic kidney disease. In early 2024, PLP and the working group incorporated a new medication, finerenone, into the pathway. This graphic pathway, which has undergone multiple rounds of user testing, is now available across the province. PLP will continue to support the Medicine SCN with updates and enhancements to the pathway as needed.

We recognize that drug costs and lack of drug insurance coverage can pose problems for patients who want to be on SGLT2i medications. In collaboration with family physician researchers in Manitoba and Ontario, and with **Diabetes Action Canada, Drs. Darren Lau, Rose Yeung, and Donna Manca** have completed a pan-provincial study of SGLT2i prescribing in adults with diabetes who are at high cardiovascular risk in Alberta, Ontario, and Manitoba. Our results show that, from 2018-2020, drug insurance special authorization requirements (i.e., in Alberta and Manitoba) and relatively high income-based deductibles (i.e., in Manitoba), may be responsible for up to 21% (special authorization) and 42% (income-based deductibles) lower SGLT2i use in Alberta and Manitoba, compared to Ontario. These findings have national importance for pharmacare policy. Fortunately, a generic SGLT2i is now available that is much less expensive and is covered in Alberta for adults ages 65 and over, which we anticipate will help all Albertans with diabetes and heart or kidney disease benefit from these medications.



*PLP researchers have helped build a provincial tool to help providers optimize medications with kidney and heart benefits in adults with diabetes, potentially extending patient survival and reducing the need for dialysis and transplants. In addition, we have studied the impact of cost and drug insurance barriers in Canada on prescribing of these medications. This work continues a year-to-year tradition of completing work with local and provincial impact and national relevance, for PLP's diabetes pillar.*

# Supporting Diagnostic Radiology and Laboratory Medicine

## Re-purposing the ordering of routine laboratory tests in hospitalized medical patients

CWC and CIHI estimate that Canadians receive over one million unnecessary laboratory tests each year. In the inpatient setting, low-value laboratory testing often occurs in the form of daily use of routine tests and is associated with hospital-acquired anemia, which may lead to increased blood transfusions, prolonged hospitalization, and higher mortality for patients. PLP Medical Director, **Dr. Douglas Woodhouse** and Physician Lead, **Dr. Anshula Ambasta**, developed and implemented virtual facilitated audit and group feedback sessions as one component of a multifaceted intervention bundle to reduce routine daily laboratory testing.



Re-purposing the ordering of routine laboratory tests in hospitalized medical patients

The 2020-2021 intervention bundle was implemented across eight medical units and four tertiary care hospitals in Calgary and was associated with:

- 14% overall reduction of routine tests
- \$1.15 cost savings per patient per day
- 20% increase in routine test-free patient days
- No worsening in patient safety endpoints

In 2023-24, the intervention bundle was implemented at an additional 14 sites across Alberta with PLP continuing to deliver initial introductory sessions to discuss unit-level, low-value laboratory data. The sessions also facilitated improvement and idea generation, prioritization, and focused on helping participants complete a commitment to practice change. PLP will continue this project in 2024-25.]



*This multifaceted intervention bundle was associated with a safe and effective reduction in routine daily lab testing in hospitals.*

## My practice: Addressing variation in radiology prioritization

Alberta spends \$457 million annually on 2.9 million diagnostic imaging (DI) procedures; however, wait times for diagnostic imaging, such as CT and MRI scans, are significantly higher than in other provinces, which can lead to delays in necessary surgery or treatment. CWC recommends improving the value of DI and the Canadian Association of Radiologists (CAR) estimates that up to 30% of these procedures are low-value.

Previous studies have focused on the referring physician to address the completeness and appropriateness of DI referrals, which has been shown to impact patient wait times. However, few QI initiatives have engaged with radiologists to identify opportunities for practice improvement on prioritization of DI referrals. PLP Medical Director, **Dr. Oliver David**, Physician Lead, **Dr. Richard Walker**, and **AHS Diagnostic Imaging (Calgary Zone)** are investigating variation in prioritization of DI referrals based on AHS CT and MRI prioritization guidelines.

This project reviewed 300 musculoskeletal (MSK) requisitions to identify which referrals incur the highest variation and to evaluate the association between MSK prioritization and patient wait times.

On June 1, 2023, findings were presented to nine radiologists. Additional activities to provide feedback and suggestions to improve and update the AHS CT and MRI prioritization guidelines are planned for 2024-25.



*Working with radiologists to understand variation in assigning priorities to a referral has immediate impacts on patients receiving timely access to imaging and subsequent care, which is a key step in processing diagnostic imaging referrals.*

## Supporting Emergency Medicine

PLP's ongoing work with socializing the emergency department dashboards continues to provide physicians with access to data, and supports practice improvement

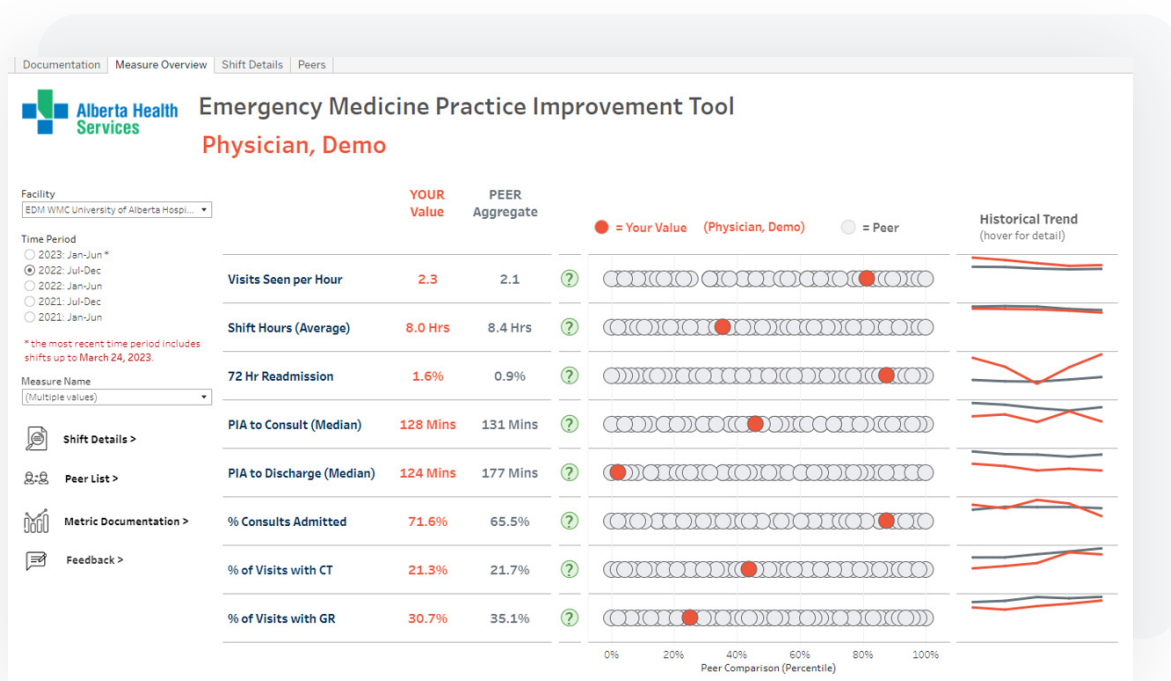
### Calgary Zone emergency department physician performance dashboard

PLP's ongoing work with socializing the **Calgary Zone Emergency Department (ED)** dashboards continues to provide physicians with access to data and supports practice improvement. Using the ED Physician Performance Report dashboard, PLP has supported the use of facilitated audit and group feedback to help Calgary ED physicians review individual performance reports using an AHS Tableau Dashboard. All 242 Calgary ED physicians had access to an individual dashboard and 70 physicians participated in FAGF sessions to identify and discuss opportunities for practice change since the project began. Connect Care implementation has provided an opportunity for the provincial spread of this intervention for ED physicians.

**AHS Clinical Departments of Emergency Medicine in the Calgary Zone and Edmonton Zone and AHS Data and Analytics**, facilitated by the **Emergency SCN**, have developed the **Emergency Medicine Practice**

**Improvement Tool dashboard in Connect Care** that includes metrics for adult and pediatric patients using emergency services in Alberta. PLP Medical Director, **Dr. Jennifer Thull-Freedman** and former Physician Lead, **Dr. Brian Holroyd** discussed the development of a provincial audit and group feedback intervention using the dashboard.

Based on the feedback from practicing physicians, PLP and the Emergency SCN Senior Medical Director **Dr. Shawn Dowling**, determined that ED physicians are ready to use the Emergency Medicine Practice Improvement Tool. Individual QI projects under consideration for the upcoming year include improving care for children with low-risk fractures, standardizing CT use following minor head injury, and improving the care of febrile infants. All three of these projects have the potential to reduce low-value interventions in low-risk patients and reduce follow-up visits to primary care physicians and referral to specialists.



Calgary Zone emergency department physician performance dashboard



All Calgary Zone ED physicians have access to their practice data in an individual dashboard and 70 have participated in facilitated audit and group feedback sessions.

## Pediatric emergency dashboard

PLP has engaged system partners including **AHS Calgary Zone Emergency Medicine** to discuss using Connect Care to develop a physician dashboard for pediatric emergency department (ED) services across the province. Physician Lead, **Dr. Antonia Stang** and PLP Medical Director, **Dr. Jennifer Thull-Freedman** facilitated these ongoing discussions. A provincial dashboard will provide ED physicians with the opportunity to reflect on their practice with the goal of improving care of pediatric patients by increasing adherence to evidence-based practice, improving efficiency of care, and reducing inappropriate testing and treatments. PLP contributed knowledge and skills to this discussion based on our work in bronchiolitis and ongoing partnership with the **Emergency SCN** on the provincial ED Dashboard in Connect Care.

As of April 2023, pediatric-specific measures have successfully been integrated into the Emergency Medicine Practice Improvement Tool dashboard. By providing both measures in a single dashboard, it consolidates resources and fosters collaboration and a community of practice. In January 2024, PLP completed work on this project and shifted to working with the Emergency SCN and Emergency Department clinicians to develop two new projects that can incorporate the pediatric measures into the Emergency Medicine Practice Improvement Tool dashboard.



*The Emergency Medicine Practice Improvement Tool has been successfully integrated with pediatric-specific measures*

## Supporting Gastroenterology and Hepatology

This year, our work in gastroenterology is focusing on improving care for people living with cirrhosis.

### Mid-term implementation evaluation of an evidence-based best practice order set for the management of liver cirrhosis

The CCAB Program aims to improve patient health and reduce the cumulative length of stay in hospital. This PRHIS-funded project, led by principal investigator **Dr. Puneeta Tandon**, a PLP Medical Director in Edmonton, developed a cirrhosis care bundle (with order sets and decision algorithms) that support clinicians caring for patients living with cirrhosis, and a comprehensive website, [CirrhosisCare.ca](https://CirrhosisCare.ca), to provide education and support clinicians and patients. The cirrhosis order set was set to launch via the Connect Care digital system to nine health care facilities in Alberta, and is underway following a delay due to the COVID-19 pandemic.



The PLP Implementation Science team, led by **Dr. Denise Campbell-Scherer** in collaboration with post-doctoral fellow **Dr. Ayesha Iqbal**, **Dr. Lee Green**, and **Dr. Puneeta Tandon** have conducted a mid-term evaluation of the CCAB program. The evaluation includes two sub-projects, with the first study investigating what is required for clinicians to adopt the order set. The evaluation included interviews with gastroenterology and internal medicine specialists and resident physicians. Preliminary analysis suggests that cognitive processes like sensemaking, belief in the value of the innovation and social factors like peer support, alignment of the intervention to their routine work and organizational norms influenced the uptake of the order set. The second project examines how study investigators navigated changing contexts and major disruptions in order to support order set implementation. Semi-structured Cognitive Task Analysis interviews were conducted with subject matter experts from the CCAB trial implementation team. The study findings identified five major disruptions during the CCAB trial implementation that impacted the order set implementation and use, as well as strategies that helped keep the implementation moving forward. To help advance the implementation in spite of disruptions, the PRHIS study investigators constantly reassessed their strategies and adapted as needed. Their success was attributed to a flexible mindset informed by complexity, allowing them to effectively navigate challenges and leverage social networks for support when necessary. Insights from the mid-term evaluation will enhance ongoing implementation efforts to boost order set adoption and use at the remaining five hospitals and be utilized in PLP knowledge dissemination processes.



*The findings from these projects will illuminate key principles and strategies that can be used to support efficient innovation implementation to advance cirrhosis care.*

## Supporting Infectious Disease Medicine and Antimicrobial Stewardship

Antimicrobial resistance poses a significant threat to global public health. If left unchecked, currently treatable infections could become deadly, while life-saving treatments like chemotherapy and transplantation could be rendered unsafe. PLP has an ongoing program of work, led by PLP Medical Director Dr. Lynora Saxinger, who serves as medical lead for the AHS Antimicrobial Stewardship for Northern Alberta, and other colleagues. We are expanding our work on beta-lactam and penicillin allergies to develop asynchronous learning modules for physicians and their teams. Our urinary tract infection decision algorithms, which aim to reduce low-value testing and inappropriate antibiotic use in emergency departments, pediatric hospital units, and long-term care facilities are all in the spread and scale stage



## Educational modules to optimize antibiotic prescribing and evaluate beta-lactam allergies

Beta-lactam antibiotics, which include penicillins, are often the drugs of choice in treating bacterial infections because they have a better safety and tolerability profile than other antibiotic classes. An inaccurate history or interpretation of beta-lactam allergy can result in patients being incorrectly labeled as being allergic, which puts these patients at risk of suboptimal treatment of infections and higher risk of side effects. This new knowledge transfer project, led by PLP Medical Director, **Dr. Lynora Saxinger**, builds on our existing program of work with beta-lactam allergies and antimicrobial stewardship. In this project, PLP will develop asynchronous educational modules to assist physicians in identifying allergy histories that warrant avoidance of beta-lactam-class antibiotics (penicillins, cephalosporins, carbapenems), as well as low-risk allergy histories that can safely be removed from the patient's record. Physicians will learn how to delabel beta-lactam allergies and counsel their patients on the allergy assessment changes. The educational modules will be developed for a wider audience and will feature tools developed by PLP for some of our previous related projects.



*These educational modules will equip physicians with the tools to distinguish between high and low-risk allergy histories, facilitating safe and effective use of antibiotics and ultimately improve patient care outcomes.*

## Supporting Medicine

We are pleased to present updates on our projects in the Medicine pillar, which include COVID Corner, improving outcomes for patients with lower back pain, co-developing a care pathway for recurrent *clostridioides difficile* infections, and advancing care for people living with amyotrophic lateral sclerosis and adrenal insufficiency

### COVID Corner, It's a Wrap!

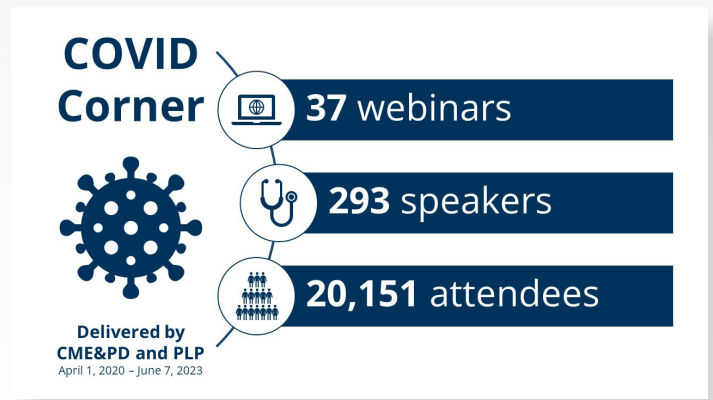
The COVID Corner series consistently provided evidence-based content to help healthcare professionals navigate the rapidly evolving science and recommendations around the management of COVID-19.

The final episode (Episode 37) focused on recognizing the role of healthcare professionals as care providers, leaders, and advocates in the face of extraordinary circumstances during the pandemic; reflecting on personal, professional and system accomplishments and lessons learned; and discussing opportunities to effect positive changes in preparing for the new normal in health care.

The series concluded this past year with the final episode on June 7, 2023, co-moderated by PLP Medical Directors, **Dr. Kelly Burak** and **Dr. Katrina Nicholson**. During the "In the Corner With" segment, Dr. Burak reflected on the success of COVID Corner, which saw more than 20,000 attendees during the 73 hours of

accredited continuing professional development provided. Although COVID Corner had an Alberta focus, it reached far beyond provincial borders, with attendees from **12 provinces and territories and 26 countries from 6 continents.**

Audience feedback describing the impact of the COVID Corner series:



- *It was outstanding – the expertise, information, credibility, breadth of topics, timeliness, and I could go on and on. It was always delivered professionally, and I understand how much work it takes by your team to make everything look smooth!*
- *You and your team successfully pivoted to deliver an absolutely critical resource to our physician community (and to others). It was seen as a source of truth.*
- *I firmly believe this effort helped people cope, feel more confident in their practices, and provide correct information to their patients. So, the learning was widely and more effectively disseminated throughout our communities and the population.*
- *When all is said and done, and we look back on the efforts undertaken during COVID to manage the crisis, I trust that COVID Corner will be seen as a critically important cog in the wheel.*

### Dr. Eric Wasylenko

John Dossetor Health Ethics Centre, Faculty of Medicine & Dentistry, University of Alberta

## Adrenal insufficiency toolkit development and evaluation for patient education to prevent adrenal crisis

The **Division of Endocrinology and Metabolism** at the University of Alberta has been dedicated to enhancing the quality of care for patients diagnosed with adrenal insufficiency (AI). AI is a relatively uncommon hormonal disorder characterized by malfunctioning adrenal glands that do not produce enough of the hormone cortisol, which requires hormone replacement therapy in the form of steroid medications. These medications alleviate symptoms such as fatigue, aches, and nausea while maintaining safe blood pressure levels. Moreover, during stressful events like infections or surgeries, patients have to make special medication adjustments, known as “stress dosing.” As patients often have to make these changes on their own, in real time, it is imperative that they receive specific education and guidance. Led by our Senior Medical Director, **Dr. Rose Yeung**, PLP worked with patients living with AI and physicians in the Division of Endocrinology and Metabolism to co-create a patient education toolkit, aimed at enhancing patients’ knowledge about their illness and supporting active engagement in their treatment. The three-piece toolkit includes an **AI patient resource** featuring educational information on adrenal hormones, common

symptoms, treatment, adrenal crisis, and when to contact their healthcare provider. An **AI wallet card** which can be filled in with key health information to let emergency personnel know that they are in adrenal crisis and expedite treatment. Lastly, there is a **personal treatment plan** document with information about adrenal crisis and common scenarios that might require stress dosing adjustments. The physician can fill in their regular treatment doses of certain medication for easy reference. Between April 2023 to March 2024, the education toolkit was successfully launched and is now available on PLP website, marking the completion of this project phase. In January 2024, **Dr. Adam Sinclair** presented the toolkits to the UofA Division of Endocrinology & Metabolism at Grand Rounds, further highlighting their significance within the medical community. The team is actively formatting the AI toolkit for inclusion in Connect Care to facilitate integration into clinical practice. Other knowledge transfer activities and outreach with patient organizations like the Addison's society are under as part of the follow-on KT project *Adrenal Insufficiency Toolkit Dissemination and Implementation*.



*This toolkit will help empower patients with adrenal insufficiency to better manage their condition, reducing the risk of adrenal crises and enhancing overall quality of life.*

## Engaging primary care providers and patient partners in co-developing a provincial pathway in the management of recurrent *Clostridioides difficile* infection

*Clostridioides difficile* infection (CDI) poses a significant health risk, ranging from mild diarrhea to severe colon damage, often triggered by antibiotic use, particularly in acute care settings. Recurrence rates of CDI are high, leading to increased hospitalization costs and a significant burden on healthcare systems. A highly effective treatment, with success rates exceeding 80%, is fecal microbiota transplantation (FMT). It is usually recommended after the second recurrence of CDI, however, FMT delivery lacks standardization, is not widely accessible, and remains investigational in Canada. Although the University of Alberta Hospital has established a stool bank supporting FMT treatment, there is still a need to increase awareness about FMT among primary care providers to address disparities in managing recurrent CDI. Consequently, a provincial clinical pathway for FMT treatment is being proposed to help improve efficiency and standardize care with insights from both physician and patient perspectives.

In collaboration with the **AHS Fecal Matter Transplant Team - Drs Karen Wong, Dina Kao, Rose Franz** and PLP Medical Director **Dr. Lynora Saxinger**, PLP initiated a project in the fall of 2023 to develop a provincial pathway for FMT, employing a human-centred design (HCD) approach. The first phase of the project was aimed at understanding and identifying gaps in the existing recurrent *C. difficile* pathways used by healthcare providers. Subsequently, five process mapping sessions facilitated by a human-centred designer were conducted to illuminate existing gaps and uncertainties when the current inpatient CDI pathway is applied to the outpatient setting. This existing AHS inpatient CDI/rCDI pathway was reviewed, and an

expanded outpatient pathway is currently being refined through co-creation sessions with the FMT team, which include gastroenterologists, infectious diseases specialists, and a nurse navigator. The final iteration of the pathway will be tested with primary care physicians and other healthcare providers to validate its applicability. A follow-on knowledge translation (KT) project will disseminate and implement the tool to ensure widespread adoption and improved management of rCDI across Alberta.



*The development of a provincial clinical pathway for the use of FMT treatment in rCDI management will help standardize and improve the care process efficiency and support better patient outcomes.*

## Rheumatology prescribing practices

Rheumatoid arthritis is the most prevalent form of inflammatory arthritis, affecting arthritis affecting an estimated 1.2% of Canadians aged 16 years and older. Sub-optimal care results in poor long-term outcomes for patients with rheumatoid arthritis including joint pain, stiffness, swelling, and damage over time. Furthermore, rheumatoid arthritis increases the risk for mood disorders, serious infections, joint replacement surgery, heart disease, and stroke.

Rheumatoid arthritis is the most common condition managed by rheumatologists and understanding current individual and group practices will provide insights into ensuring best outpatient care for patients with rheumatoid arthritis, decreasing the need for acute care services and reducing costs.

In 2023-24, PLP Medical Director, **Dr. Oliver David** and Physician Lead, **Dr. Steven Katz**, completed the foundational work for this project. Consenting rheumatologists will receive their individual data reports with peer comparators and participate in a PLP facilitated audit and feedback session in 2024-25.



*Providing physician-level prescribing data empowers rheumatologists to identify how to offer their patients the best care and potentially decrease the use of acute care services.*

## Knowledge transfer to optimize early diagnosis of Amyotrophic Lateral Sclerosis

Amyotrophic lateral sclerosis (ALS) is a fatal, progressive disease that results in a loss of motor control. Early diagnosis is crucial for patients to be able to access new medications that will improve their quality of life, but these can only be given within a short period of time following symptom onset. Unfortunately, because the symptoms of ALS often mimic those found in other, more commonly seen conditions, the diagnostic process is often lengthy, involving referrals to multiple medical specialties. PLP is working with **Dr. Wendy Johnston** and the **UofA ALS Multidisciplinary Clinic**, in an effort to disseminate the findings of our previous project that looked at developing a patient journey map to better understand the preconceptions, attitudes,

and system-level barriers that need to be addressed in order to ensure timely access to treatment. The team is developing a 4-part webinar series to assist healthcare providers in separating out common symptoms from those that may indicate serious progressive disease. As ALS is a rare condition, the focus will look at serious progressive disease more generally in order to help physicians identify a differential diagnosis and an effective referral strategy in an effort to expedite diagnosis. The series is expected to launch in May 2024. Speakers will include **Dr. Mark Ng**, a physiatrist, **Dr. Daniel Fok**, a neurologist, **Dr. Diana Rucker**, a geriatrician, and **Dr. Caroline Jeffery**, an otolaryngologist.

### **Head and Shoulders, Knees and Toes: Neurological presentations and serious mimics**

**Foot drop - Is it always sciatica?** **Dr. Wendy Johnston** and **Dr. Mark Ng**, May 8, 2024.

**Numb hand - Is it always carpal tunnel syndrome?** **Dr. Wendy Johnston** and **Dr. Daniel Fok**, May 15, 2024.

**The senior with functional decline - Geriatrics or neurology?** **Dr. Wendy Johnston** and **Dr. Diana Rucker**, May 22, 2024.

**Speech change - Is it always a stroke?** **Dr. Wendy Johnston** and, **Dr. Caroline Jeffery**, May 29, 2024.



*This educational series will help healthcare professionals identify neurological symptoms and red flags in order to expedite referrals, diagnosis and treatment to ensure that patients receive timely care.*

## Supporting Oncology

As our oncology pillar continues to grow, we are excited to be collaborating with the Cancer SCN on a multiphase project to support the co-development and dissemination of resources that will improve cancer diagnosis and outcomes, as well as a project that will examine cancer screening rates since the onset of the COVID-19 pandemic.

### **Cancer SCN Community Strengths Grant - Research, education, and clinical decision supports for primary care practitioners**

Accessing cancer diagnosis remains a challenge for rural and remote communities due to their smaller size, dispersed populations, and limited healthcare resources. Similarly, newcomers to Canada often face delays in cancer diagnosis compared to regional averages, with deteriorating health outcomes over time, including cancer outcomes. To address these disparities, PLP and the **Cancer SCN** collaborated to explore the need for resources and co-develop education materials and clinical decision support tools with primary care practitioners serving these communities. The project team included **Dr. Anna Pujadas Botey**, **Adebola**



*This project has clarified which supports are needed by family physicians caring for rural Albertans and newcomers to Canada who have cancer and developed a patient journey map to understand their experiences navigating health care during and after their diagnosis.*

## Addressing cancer screening gaps in Alberta

The Government of Alberta has established various provincial screening initiatives aimed at early detection, diagnosis, and treatment of several types of cancer. The Alberta Screening for Life program conducts screenings for cervical cancer in women aged 25-69, breast cancer in women aged 45-74, and colorectal cancer in individuals aged 50-75.

Cancer screening programs were briefly suspended during the initial stages of the COVID-19 pandemic. Despite the resumption of services, public health restrictions in Alberta persisted intermittently for over two years, and other factors contributed to delays in screening. Studies conducted in various regions, including Alberta, have demonstrated significant reductions in cancer screening rates and new cancer diagnoses, including those targeted by screening programs, for the period March to December 2020.

The project, led by **Dr. Finlay McAlister**, in collaboration with PLP Co-Lead **Dr. Denise Campbell-Scherer**, is looking at cancer screening rates beyond the initial nine months of the pandemic to assess ongoing trends in subsequent waves and after the lifting of all pandemic-related restrictions in Alberta on June 30, 2022. Furthermore, the study is examining whether there were differences in the uptake of three Alberta cancer screening programs before and during the pandemic among population subgroups based on age, socioeconomic status, rural/urban residence, comorbidities, and primary care physician attachment. Findings from this project will inform targeted and evidence-based strategies to address screening disparities and ensure equitable and timely access to cancer screening services in Alberta.



*This project aims to understand the impact of the pandemic on cancer screening, so that we can develop better strategies to ensure everyone in Alberta gets the cancer screenings they need on time.*

## Supporting Pediatrics

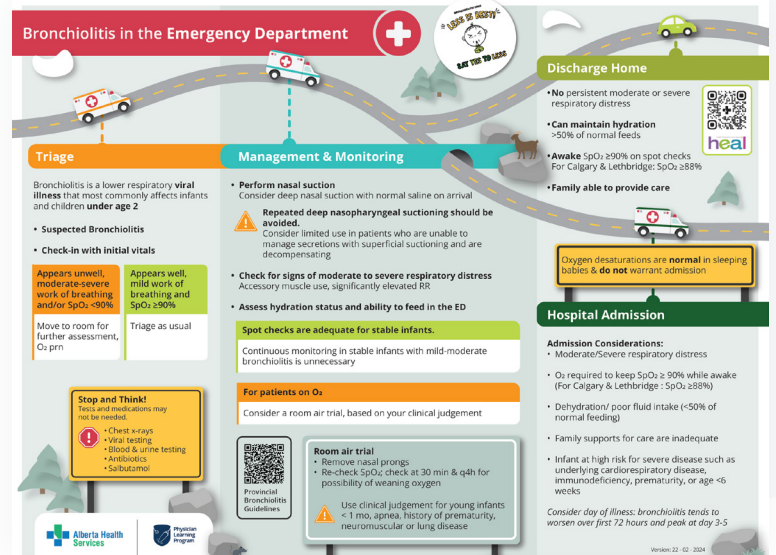
PLPs program of work in pediatrics is currently focused on improving bronchiolitis treatment and advancing care for pediatric patients living with neurodevelopmental disorders.



# Reducing low-value care in bronchiolitis management: A provincial initiative

Bronchiolitis, a lower respiratory viral infection, is the leading cause of infant hospitalization in Canada and one of the top diagnoses for inpatient medical expenditures in young children. Bronchiolitis is seasonal and occurs during the winter months (November to April). Practice guidelines do not recommend routine use of certain diagnostic tests and medications in managing bronchiolitis, yet prior studies suggest that these low-value interventions are routinely administered to patients with bronchiolitis in the ED and when admitted to hospital.

In collaboration with the **Maternal Newborn Child & Youth (MNCY) SCN** and **IHOT**, PLP co-created individual physician and aggregate site-level data reports, with PLP leading the work on stakeholder engagement, statistical analysis, data visualization, and report generation. Facilitated audit and group feedback (FAGF) sessions have been delivered as part of a multi-faceted intervention to improve management of bronchiolitis in Alberta.



Bronchiolitis decision support tools

This year, PLP hosted six sessions with 84 attendees, in addition to four stakeholder presentations with 64 attendees, to spread awareness of the improvements we are observing due to our project initiative. Knowledge translation of our project occurred at two conferences: the *CWC National Meeting in May 2023* and the *Institute for Healthcare Improvement Annual Forum in December 2023*.

As part of a related qualitative study, interviews were conducted with site champions to identify barriers and facilitators to implementation of the multi-faceted components of the bronchiolitis project.

The project is led by PLP Medical Director, **Dr. Jennifer Thull-Freedman** and Physician Leads, **Dr. Michelle Bailey, Dr. Daina Thomas, Dr. Lindsay Long, Dr. Brittany Sunderani** and **Dr. Piush Mandhane**.



*This initiative has brought together clinical teams across Alberta to improve care for infants with bronchiolitis. A 6-10% reduction in unnecessary chest X-ray use has been observed in ED and inpatient settings.*



## Bronchiolitis decision support tools

Educational materials and decision support tools have been created as part of this multi-faceted intervention to improve bronchiolitis management in children in Alberta. The development of these resources was driven by the needs and questions of participating sites and their families. The library of work includes a total of 15 new resources, five updated resources, and two videos. Family resources have been evaluated in collaboration with **Alberta Children's Hospital & Stollery Patient and Family Advisory Committees**.

Efforts to enhance and broaden the collection of bronchiolitis decision support resources have been ongoing. A key addition to this library is an infographic designed specifically for emergency department providers. This tool, currently available on **AHS Insite** (intranet), succinctly outlines the best practices for managing bronchiolitis within the emergency setting, offering essential information to immediately improve patient care.

The project is led by **Dr. Michelle Bailey, Dr. Daina Thomas, Dr. Piush Mandhane, Dr. Lindsay Long** and **Dr. Brittany Sunderani**.



*This sub-project has produced 22 bronchiolitis knowledge products, including videos and info resources and algorithms, enhancing care practices for children with bronchiolitis in Alberta.*

## Autism and healthcare utilization

The timely diagnosis of autism is crucial for accessing appropriate supportive services and has been linked with improved social and health outcomes. Early diagnosis and intervention are particularly effective at younger ages, however, in Alberta, the wait time for an autism diagnosis can extend up to 18 months from the initial recognition of symptoms. Longer delays may occur for girls and children over five years of age. During the waiting period for diagnosis, families often encounter challenges due to the limited autism-specific training among healthcare providers.

This project, led by **Dr. Nonsi Mathe**, an Atlantic Fellow for Health Equity and Edmonton PLP Scientific Director, with support from **Dr. Daniel Morena De Luca** and the **Precision Medicine for Autism (PRISMA group)** is exploring the relationship between the age of autism diagnosis and subsequent healthcare utilization. Examining this relationship will help identify existing gaps in healthcare provision and can inform the development of targeted interventions to improve access and health outcomes for autistic individuals. This project focuses particularly on understanding the needs of equity-seeking groups and is part of a broader initiative to enhance healthcare and social service planning for the autism community in Alberta. This study is using a community-engaged approach, and is collaborating with community partners like

## Autism Edmonton.

Using Alberta administrative health data, this project is examining annual autism diagnoses and various socio-demographic factors, including age at diagnosis, household income, and education level, alongside healthcare utilization over two decades. Findings from this project will be pivotal in delineating the dynamics of autism diagnosis rates and the age of diagnosis in Alberta and identifying barriers to timely diagnosis. These insights will be instrumental in enhancing healthcare planning and intervention strategies for individuals with autism.



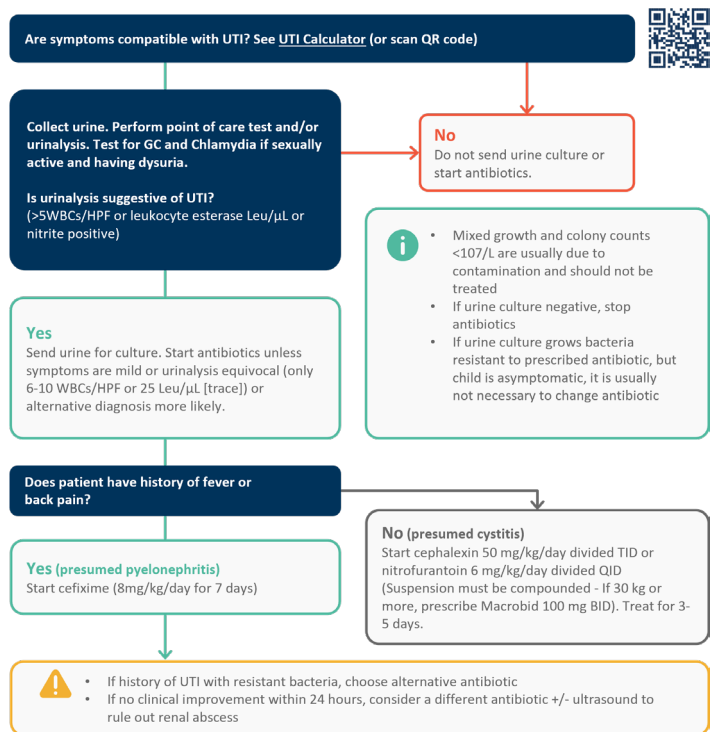
*Identifying existing gaps and challenges to timely autism diagnosis will illuminate opportunities for action to enhance care for people with autism.*

## Management of pediatric urinary tract infections in Calgary and Edmonton emergency departments

PLP Medical Director, **Dr. Jennifer Thull-Freedman** and Physician Leads, **Dr. Joan Robinson, Dr. Cora Constantinescu,** and **Dr. Alena Tse-Chang**, are collaborating with **AHS Calgary** and the **Edmonton Zone ED** to examine antibiotic use for pediatric emergency visits with urinary tract infections (UTIs). PLP has supported the co-creation of aggregate-level data reports for 14 emergency and urgent care sites in Calgary and Edmonton. These reports include an algorithm that covers the diagnosis and management of these patients including data as well as urinalysis, urine culture, and antibiotic prescribing data.

In early 2023, the project team finalized the Management of UTIs in Pediatric Patients in the ED algorithm. In July 2023, site-level reports and the algorithm were sent to site leads at 11 hospitals: Alberta Children's Hospital, Grey Nuns Community Hospital, Misericordia Community Hospital, Northeast Community Health Centre, Peter Lougheed

### Management of UTIs in Healthy Pediatric Patients (2 mos-17 yrs) in the ED



### Management of pediatric urinary tract infections in Calgary and Edmonton emergency departments (ED)

Hospital, Sheldon Chumir Health Centre, South Calgary Health Centre, South Health Campus, Stollery Children's Hospital, Strathcona Community Hospital, and Sturgeon Community Hospital. Foothills Medical Centre, Rockyview General Hospital, and Royal Alexandra Hospital saw very few pediatric patients with UTIs; therefore, they were sent a provincial report with the updated algorithm. In September 2023, five physicians consented to receive individual data reports. PLP is preparing repeat data reports for site leads at the hospitals that received reports in July 2023 with project activities continuing into 2024-25.



*By promoting a more appropriate antibiotic and shorter prescription duration, antimicrobial stewardship aims to reduce antibiotic resistance.*

## Supporting Psychiatry

We are pleased to present our current project in the new psychiatry pillar, which focuses on depression and prescribing practices.

### Practice patterns among clinicians caring for patients with depression

Depression is a common and serious mood disorder that is treatable. It is associated with emotional, physical, and cognitive symptoms that may have profound impacts on an individual's functioning. In Canada, about 5% of people aged 15 and older have experienced a major depressive episode in the past year, and about 11% of adults will meet the criteria for major depressive disorder in their lifetime. Prevalence tends to be higher in people of typical working age (15–64 years), making the disorder one of the leading causes of work-related disability and lost productivity. Moreover, since depression is often under-diagnosed and under-treated, particularly among certain groups, the true prevalence of depression may be higher than what is reported in surveys. Antidepressants play a significant role in treatment because of their demonstrated efficacy and wide availability, and most are fairly well tolerated by adult patients. However, few studies have outlined the long-term trends of prescription patterns of antidepressants for patients with depression. As this gap is pronounced in literature in the Canadian context, this project is examining the patterns of antidepressant prescription in Alberta to inform quality improvement activities. Mapping out antidepressant prescription patterns would be informative for practitioners and health policy makers in evaluating impacts of depression treatment. This study is also examining health equity considerations and economic analyses on cost differentials between prescribing practices. Findings will inform subsequent work on advancing practice for depression care. This project is led by PLP Medical Director **Dr. David Ross**, Chair of the Department of Psychiatry at the University of Alberta.



*Understanding antidepressant prescription patterns will provide insights on potential gaps that can be addressed to enhance care for people with depression.*

# Supporting Surgery

## Alberta Surgical Initiative – Reduction in clinical variation

Approximately 70,000 people in Alberta were waiting for surgery at the time of the AHS Review in 2019, and 50% were waiting longer than clinically appropriate. **AHS**, in partnership with **Alberta Health**, developed the **Alberta Surgical Initiative (ASI)**, a plan that strives to ensure that all Albertans receive their scheduled surgeries within clinically appropriate targets. We're focusing on improving the patient's surgical journey, from the time patients seek advice from their family doctor, to when they are referred to a specialist, to their surgery and rehabilitation. In this multi-year initiative **ASI – Reduction of Clinical Variation program** led by **Dr. Stewart Hamilton**, and **AHS IHOT**, led by **Dr. Donald Dick**, are focusing on reduction of clinical variation of 17 procedures identified by AHS Alberta Surgical Leadership

Executive team. For more information: [Alberta Surgical Initiative website](#).

PLP team, led by PLP Medical Director, **Dr. Katrina Nicholson** is supporting the initiative with a current focus on three procedures: tonsillectomy, prostate resection, and retained ureteral calculi. Using HCD approaches, the team provided data visualization, in collaboration with **IHOT** and **PSDA**. The team also designed working groups sessions and engaged with individual surgeons, using peer-to-peer facilitation and individual interviews, with efforts towards developing appropriate interventions, strategies, and practices. Once these were developed, the team worked collaboratively with **ASI – Reduction of Clinical Variation program** and **ASI - Day Surgery Optimization program** to draft recommendations to generate effective change within each of the procedures and surgeries as detailed below.

### Tonsillectomy

This year, three dedicated working groups have focused on evaluating tonsillectomy procedures, examining aggregate provincial and site-level data, along with the adoption of currently available guidelines. These groups, which include leading otolaryngologists from various zones within our province, have identified variations in practice but concluded that no immediate interventions are necessary at this time. Final recommendations and updates on the data are anticipated by mid-2024, marking an important step towards optimizing tonsillectomy procedure guidelines and practices.

### Prostate Resection

The observation of notable clinical variations in prostate resection practices across the major urban zones was of interest to the **ASI-Day Surgery Optimization** team. To better understand these variations, two working group were convened, with representatives from both the Calgary and Edmonton Zones. In addition to a comprehensive analysis of aggregate zonal and site-level data on a range of relevant variables relevant, the groups also examined the existing practice patterns and clinical criteria guiding patient selection. During the second meeting, data was reviewed through the lens of the Systems Engineering Initiative for Patient Safety framework. This approach aims to understand the discrepancies between current practices and desired outcomes, highlighting the impact of the system's design on achieving these goals.

## Retained Ureteral Calculi

The project addressing the management of retained ureteral calculi was launched through a collaboration with the **ASI-Day Surgery Optimization** after identifying significant clinical variations between Alberta's two major urban zones. Two working group meetings, with representatives from both the Calgary and Edmonton Zones are carrying out an in-depth examination of aggregate zonal and site-level data, and an analysis of perceived practice patterns and the clinical criteria employed for patient selection. To facilitate comparisons of surgical practices across different clinical zones, the initial working group developed visual clinical practice pathways, which have identified underlying reasons for the observed variations. Moving forward, recommendations aimed at minimizing these clinical variations will be formulated to support further practice harmonization across the zones.

PLP's previously completed work on panniculectomy is now being implemented by the ASI Reduction in Clinical Variation team. Upcoming work will focus on hip and knee revisions, breast reduction, and carpal tunnel surgeries.



*This multi-year initiative is streamlining surgical practices across Alberta and reducing clinical variations across multiple procedures (tonsillectomy, prostate resection, and retained ureteral calculi) to enhance equitable and timely access to surgery based on the latest evidence and guidelines.*

## A feasibility study of the Illuminate 360° approach for monitoring the implementation of the Facilitated Access to Surgical Treatment program in Alberta, Canada

Health system innovations aimed at improving healthcare access are complex interventions that can have unintended consequences; hence the need for near real-time evaluation approaches that capture evolving contexts and impacts. This need became apparent with the initiation of the ASI Facilitated Access to Specialized Treatment (FAST), a province-wide centralized access and triage system to address surgical case backlogs. The goal of FAST is to improve surgical access for patients and reduce wait times for initial surgical consultation.

This project explored how to design a system to provide near real-time feedback on context and impacts to inform health system innovations like FAST; and how to operationalize data collection across diverse patient populations and providers. We reached out to primary care providers, surgeons and their teams, patients, families, and advocates across the province. We generated a diagrammatic representation of the Illuminate 360° approach for monitoring and adapting complex health system innovations. Examples of the types of information that can be collected by this approach included micro-narratives about patient and provider experiences which are linked with quantitative descriptions. These data can help identify emergent patterns in responses from patients and health care providers, which can inform communication strategies

and adjustments to the implementation roll-out. This study is the first of its kind in applying this approach to the pressing challenges of generating near real-time information to support the roll-out and ongoing optimization of a complex intervention in healthcare. This PLP-partnered project was a collaboration with the **AHS Surgery SCN**, and the **Illuminate Lab** at the University of Alberta was led by PLP team member **Dr. Nicole Ofosu** and co-lead **Dr. Denise Campbell-Scherer** in partnership with SCN team members **Dr. Mary Brindle, Dr. Sanjay Beesoon, Dr. Sandy Berzins**.



*Building capacity to generate near real-time information about evolving context and multifaceted impacts of innovations can provide critical insights for action in healthcare systems.*

## Supporting Women’s Health

We are pleased to report on projects in our growing Women’s Health pillar. Our current program of work includes projects focused postpartum hemorrhage, optimizing testing, interventions, and prescribing during pregnancy, and improving outcomes for patients with anemia. Many of our other projects include aspects of women’s health and health equity more broadly and are included in other sections of our annual report.

### Postpartum hemorrhage: No denial, no delay- the Alberta interprofessional toolkit

Through dedicated partnerships and innovative projects, PLP continues to respond proactively to the healthcare needs of Albertans. Our ongoing collaborations and expansions are poised to enhance healthcare quality and efficiency across the province. As part of the different collaborations with stakeholder organizations and partners, PLP and L3 were approached by the **Maternal, Newborn, Child, and Youth (MNCY SCN)** and the **Perinatal Health Program from AHS**, with the goal of disseminating a provincial-wide postpartum hemorrhage (PPH) toolkit created for providers and health care teams. This toolkit has the goal of reducing maternal morbidity from PPH across the continuum of pregnancy through late pregnancy and delivery, including 1) antenatal care (risk identification and treatment of anemia); 2) labor and delivery (early recognition and treatment and advanced management); and 3) care of the patient who has experienced PPH after discharge from the hospital.

PLP and Office of Lifelong Learning collaborated with these organizations to develop and deliver a three-part webinar series which was attended by physicians, nurses, subspecialists, and midwives. PLP was able to expand the reach of the toolkit to more than 1300 healthcare providers through the live presentations, asynchronous learning resources, and the dissemination of the Pearls for Practice Educational resources.



**No Denial, No Delay – Adopting a Standardized Approach for Postpartum Hemorrhage Identification and Management in Alberta.** December 7, 2023

Presented by: **Dr. Stephanie Cooper** and **Dr. Giselle DeVetten**



 **No Denial, No Delay - Management of Severe Postpartum Hemorrhage.** December 14, 2023

Presented by: **Dr. Colin Birch** and **Dr. Rob Thompson**

 **Panel Discussion: Putting it all together - Perspectives on Postpartum Hemorrhage** December 21, 2023.

Panelists: Patient and Family Advisor **Katie Richardson**, **Jacklyn Zakresky**, and **Dr. Philippa Brain**

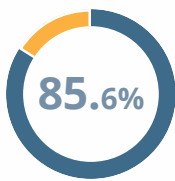


*PLP helped disseminate key information and resources regarding postpartum hemorrhage in a learning series for a multidisciplinary audience, including physicians, subspecialists, midwives, and nurses.*

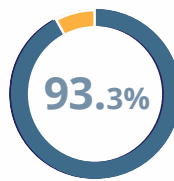
## Postpartum hemorrhage

451 participants total for the 3 webinars

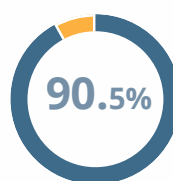
213 asynchronous viewings (to March 31, 2024)



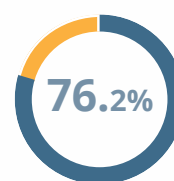
Feel confident about implementing change in my practice



Was relevant to my practice



Met my learning needs



Helped me reflect on my practice

## Obstetrics and Gynecology pathway development

PLP Medical Director, **Dr. Katrina Nicholson**, collaborated with Physician Leads Dr. Kelly Albrecht and Dr. Jackie Thurston, to develop three primary care pathways on managing abnormal uterine bleeding, and with **Dr. Shunaha Kim-Fine** and the **AHS Calgary Zone Pelvic Floor Clinic** to develop a pathway for female urinary incontinence. All four pathways aim to increase family medicine's capacity to handle common issues without a specialist referral. Other partners include the **Calgary PCNs**, **Specialist Link**, and the **Calgary Zone Urology** and **OBGYN Divisions**.

PLP supported the development of four Primary Care Pathways deployed on Specialist Link in 2021:

- Bleeding After Pregnancy
- Female Urinary Incontinence
- Abnormal Uterine Bleeding
- Post-menopausal Bleeding

The OBGYN Pathways continue to be distributed and are now featured prominently in the Alberta Pathways Hub. This year, PLP supported design updates to the existing adult pathways to ensure seamless integration with the newly introduced Adolescent OBGYN Pathways. PLP began developing these adolescent OBGYN pathways this year to help primary care physicians care for adolescents with abnormal uterine bleeding and ovarian cysts, aiming to reduce the burden of increased demands on pediatric gynecology services. This work is being completed under the guidance of **Dr. Philippa Brain**.





This initiative successfully developed and deployed four OBGYN pathways, increasing primary care's ability to manage common women's health issues locally, thereby reducing the need for specialist referrals. This work is currently expanding to include adolescent care.

## Antimicrobial prophylaxis in pregnancy

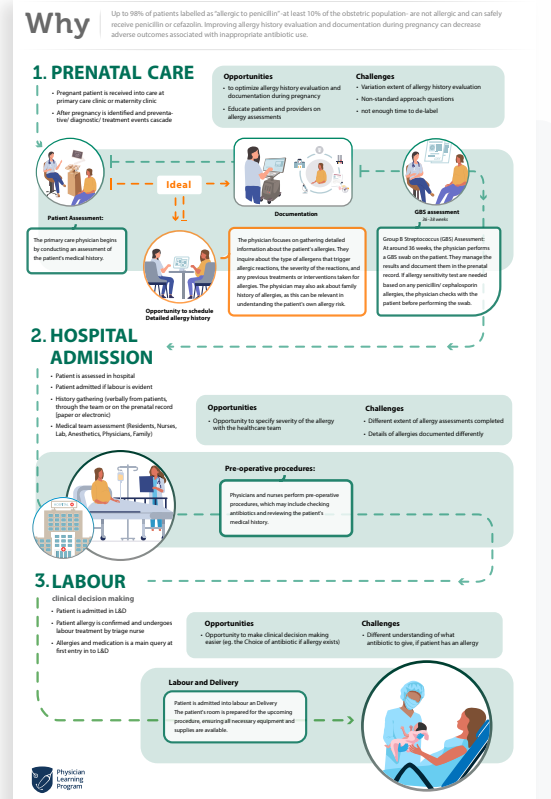
The use of antibiotics as a prophylaxis in pregnancy is a common practice because of the significant risks of infection from Early Onset-Neonatal Group B Streptococcus disease (GBS) and surgical site infections from cesarean sections. Historically, penicillin has been the antibiotic of choice for these conditions, and in cases of penicillin allergy, cefazolin is a recommended alternative. However, patients with a penicillin allergy often, unnecessarily, receive inferior, second-line antibiotics based on out of date information, or due to patients being mislabeled as allergic. Research has shown that, of the 10% of people who report a penicillin allergy, up to 98% of them are not truly allergic and can safely receive penicillins at a very-low risk of serious reactions.

Optimizing the use of antimicrobials in pregnancy and delivery is critical for improved outcomes for both mother and baby. This multi-phase project seeks to understand this problem space to inform the development of follow-on KT and intervention project(s), to help optimize antimicrobial prophylaxis in pregnancy. This project is led by PLP Medical Director **Dr. Eliana Castillo**, Women's Health Clinical Associate Professor of Medicine and Obstetrics and Gynaecology, University of Calgary, and in consultation with **Dr. Lynora Saxinger** of the **AHS Antimicrobial Stewardship** group.

## Phase 1: Stakeholder mapping and patient journey mapping

As part of launching our women's health pillar, we carried out a stakeholder mapping activity to inform the study design and extend our dissemination network. We engaged with individual and organizational stakeholders across the care continuum, in rural and urban settings, and across a range of obstetrical team roles. We met with obstetrical networks, associations, and organizations, including the **MNCY SCN**. Using HCD approaches, we developed a patient journey map that illuminates the perinatal process of a patient that qualifies for antibiotic prophylaxis and their care. The goal was to understand the process(es) related to prenatal allergy identification, reaction risk assessment, documentation, and communication across the care continuum. In addition to interviewing family physicians, obstetricians, obstetrical nurses, midwives and, residents, we reviewed a broad range of

### Understanding the process of allergy documentation — During Pregnancy



Allergy documentation journey map

documents, including processes, policies, and documentation, including prenatal records, standing order sets, and electronic documentation across and within the care continuum. There are challenges with allergy data in Connect Care, and standardized processes for updating inaccurate allergies are insufficient. The process mapping also identified the need for decision algorithms for group B streptococcus and cesarean surgeries. The findings from the patient journey map are being incorporated with the data component from phase 2 of the project, to inform intervention planning and execution of KT activities.

## Phase 2: Understanding baseline data

This phase of the project focuses on secondary analysis of administrative health data, and is examining antimicrobial prophylaxis in different care environments, such as primary care, specialty care (obstetrical and/or midwifery), and tertiary care (labor and delivery units, operating reports). Historical and current data analysis will help us understand the extent and nature of practice variance, and the degree to which current practices are guideline concordant. The baseline data will aid in identifying possible points for intervention (e.g, primary or tertiary care), and in what order, and will provide baseline data to evaluate the effectiveness of interventions.

## Phase 3: Antimicrobial use in pregnancy: Developing decision

Group B streptococcus (GSB) is a bacteria that is carried by approximately 10-30% of pregnant women in Alberta. Generally, 40-70% of babies exposed to GSB during delivery will colonize the bacteria, and if not treated, approximately 1-2% of those babies will develop infections such as sepsis, pneumonia, or meningitis, and will require medical care. Approximately 5% of babies who become infected with GSB will die.

To prevent infections to babies, mothers should be tested for GSB and treated with antibiotics prior to delivery, and penicillin allergy is a consideration. GBS-positive women with penicillin allergy have higher rates of cesarean section and longer hospitalizations than GBS-positive pregnant women who are not allergic to penicillin. Earlier phases of this project identified the need for decision algorithm tools to support more optimal use of antibiotics for GSB in pregnant women, and for antibiotic surgical prophylaxis for cesarean sections. To close this gap, we are using human centred-design approaches to develop two distinct tools using human centred design approaches: one tailored for Group B Streptococcus (GBS) prevention and another focused on preventing surgical site infections.




*This multiphase project is taking a comprehensive look at antimicrobial use during pregnancy, with the goal of improving patient outcomes.*

## Reducing type and screen as standard order for elective C-sections


CWC recommends that routinely performing a type and screen test at the time of delivery is unnecessary unless there was no prior test during the pregnancy and/or the risk of maternal hemorrhage or transfusion is high. PLP Medical Director, **Dr. Jackie Thurston** and Physician Leads, **Dr. David Johnson, Dr. Piush**

**Mandhane**, and **Dr. Phillipa Brain** are collaborating with **OBGYN, Family Medicine and Transfusion Medicine in AHS Calgary Zone** and **OBGYN at Grey Nuns in Edmonton Zone** on this project that aims to maintain safe practices for patients while reducing unnecessary testing. This project consulted parties of interest from the **MNCY SCN, Grey Nuns Hospital**, and **Foothills Medical Centre** to identify strategies that reduced practice variation and increased adherence to CWC guidelines at these sites.

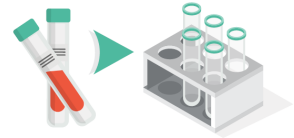
Did you know, for every low-value type + screen . . .



It costs **\$62.71**



It takes **30-60 min to complete** after a sample has been received in the lab—longer if confirming the presence of anti D



It requires **2 test tubes of blood per patient + 5 test tubes** to complete the test

### Reducing type and screen as standard order for elective C-sections

PLP interviewed OBGYN physicians at urban and regional centers in Alberta to understand potential causes of the unnecessary ordering of type and screen tests. Drawing on that qualitative data, as well as current testing rate data, and consultations with anesthesiology, lab services, and transfusion medicine, a pre-delivery order set was developed as an intervention strategy to reduce practice variation and increase adherence to CWC guidelines. A pre-delivery Connect Care order set approved by anesthesiology, OBGYN lab services, and transfusion medicine will be implemented at 11 sites across Alberta. Practice variation and adherence to CWC guidelines will be monitored to identify whether further interventions, such as audit and feedback, may be needed.

Since April 2023, PLP has made considerable progress, through collaborating with partners of interest, to co-develop a type and screen decision support tool and create a clear report outlining the updated testing criteria for physicians and care teams. Ten sites received this report, which includes site-specific data as well as test costs and project benefits and timelines. Dedicated local champions have been recruited, and 12 facilitated audit and group feedback (FAGF) sessions have been held for over 104 physicians at the Foothills Medical Centre, Peter Lougheed Centre, Grande Prairie Regional Hospital, Rockyview General Hospital, Royal Alexandra Hospital, Misericordia Hospital, Northern Lights Hospital, and South Health Campus.



*By aiming to reduce type and screen testing for elective C-sections to 20%, we will save money, supplies, lab resources, and patient time.*

## Operative vaginal delivery practices in Calgary Zone

Childbirth carries risks, for both the mother and infant, regardless of the method of delivery. However, operative vaginal delivery (OVD) presents several additional fetal and maternal risks. PLP Medical Director, **Dr. Jackie Thurston** and Physician Lead, **Dr. Maryam Nasr-Esfahani** collaborated with **AHS Calgary Zone**

**Obstetrics and Gynecology** (OBGYN) on this project to assess variation in rates between Calgary hospitals and provide individual physicians access to practice data with opportunities to discuss their OVD practices, OVD guidelines, and opportunities for improvement using FAGF sessions. PLP's contributions to the project were completed in 2023.

In 2018 and 2019, data from Calgary hospitals showed OVD rates of between 13.1% and 29.6%. Monitoring of OVD rates showed a downward trend with one Calgary hospital with the highest rate has demonstrated a 9.9% reduction in OVD. As part of our knowledge transfer and broad dissemination strategy, this project was presented at the 2022 SOGC Annual Clinical and Scientific Conference.



*This initiative has contributed to an ongoing decrease in operative vaginal delivery practices, resulting in reduction of risks associated with OVD in Calgary.*

## **Anemia in reproductive-age women in Alberta**

Anemia occurs when there are not enough red blood cells or hemoglobin to carry oxygen to the body's tissues. It affects approximately 10% of Canadian women in their reproductive years, and it poses significant global health concerns, as the condition is linked to unfavorable outcomes for both mothers and newborns. Among reproductive-age women with anemia, one specific type of anemia - iron deficiency anemia (IDA) - is a common cause of healthcare interventions such as red blood cell transfusions and Emergency Department visits. Although anemia can be managed with appropriate treatments, IDA is not optimally addressed within Alberta's general population, particularly among groups facing heightened risks of adverse health outcomes. Recent reports note worrisome rates of IDA among pregnant women across Alberta, with those from rural areas, low socioeconomic backgrounds, and certain ethnic origins being disproportionately affected. It is unclear what obstacles hinder timely diagnosis and treatment of IDA in Alberta.

To help address these concerns, a population-based cohort study is underway to examine the prevalence of anemia and IDA among reproductive-age women in Alberta. Led by PLP Medical Director **Dr. Rose Yeung**, in collaboration with **Dr. Cynthia Wu** and **Dr. Linda Sun**, the project will also examine practice patterns and health service utilization. This project will help illuminate the gaps in addressing IDA, and contribute to generating effective, contemporary solutions.



*By identifying and addressing barriers to proper IDA management, we can improve the health outcomes of women and their babies across Alberta, especially those in vulnerable communities.*

# Supporting Health Equity

The Quintuple Aim of PLP, as outlined in our 2024-27 business plan, notes the importance of addressing inequalities in health, improving the health and well-being of Albertans, and enhancing patients' experience of care. One way of achieving these aims is to apply a health equity lens to individual PLP projects where feasible, and to support physicians in understanding how social determinants of health may be impacting the health behaviors and outcomes of their patients, and how different parts of the health care system may assist in addressing the social determinants of health of their patients. A number of our current projects include consideration of health equity, including:

- Health equity in primary care
- Addressing cancer screening gaps in Alberta
- Provincial surgery wait time: Patient and provider experiences with the integrated province-wide central access system for surgical consultation
- Healthcare utilization and autism
- Alberta surgical initiative – Reduction in Clinical Variation
- Reducing type and screen as standard order for elective C-sections
- Development of an online cholesterol management tool

Past projects in ongoing spread and scale with elements of health equity include:

- Household food insecurity webinar series: Addressing clinical and social determinants of health to advance diabetes and obesity prevention and management in vulnerable ethnocultural newcomer communities
- Understanding and mitigating the impacts of COVID-19: Addressing misinformation and vaccine hesitancy

PLP's new medical director in health equity, **Dr. Ginetta Salvalaggio**, along with **Dr. Denise Campbell-Scherer** and **Dr. Nonsi Mathe**, are exploring options for programmatic initiatives for Health Equity, leveraging the partnership with the **Inner City Health and Wellness Program**. This collaboration underscores our commitment to advancing health equity across diverse communities. We continue to develop and refine PLP's approach to meeting our goal of operationalizing health equity. This includes reviewing the best available evidence on addressing inequity at the physician level and investigating what data are available to support this goal. In addition, we are exploring potential partnerships with other organizations and equity-seeking groups, and endeavoring to incorporate the views and needs of the latter to ensure meaningful outcomes.

# Physician Engagement & Facilitated Audit and Group Feedback Sessions

## Provincial Bronchiolitis QI Project

- Year in Review Session, hosted by PLP, October 23, 2023. Bailey, M. (Presenter), Solbak, N. (Presenter), Long, L (Presenter), Thompson, E. (Facilitator).
- Year in Review Session, hosted by PLP on October 26, 2023. Bailey, M. (Presenter), Solbak, N. (Presenter), Long, L (Presenter), Thompson, E. (Facilitator).
- Bronchiolitis Follow-up Session – Airdrie. Session hosted by PLP on November 15, 2023. Sunderani, B. (Presenter), Solbak, N (Presenter), Thompson, E. (Facilitator).
- Bronchiolitis Follow-up Session – Brooks, Session hosted by PLP and AHS IHOT, December 04, 2023. Thomas, D. (Presenter), Solbak, N. (Presenter), Thompson, E. (Facilitator).
- Bronchiolitis Follow-up Session – Ponoka. Session hosted by PLP on January 30, 2024. Sunderani, B. (Presenter), Solbak, N (Presenter), Thompson, E. (Facilitator).
- Bronchiolitis Follow-up Session – Medicine Hat Inpatient. Session hosted by PLP on March 18, 2024. Bailey, M. (Presenter), Thompson, E. (Facilitator).

## Reducing Type & Screen as Standard Order for Elective C-Sections

- Peter Lougheed Centre Anesthesia Grand Rounds, hosted by IHOT, December 8, 2023. Janmohamed, R. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Peter Lougheed Centre OB Leadership, hosted by IHOT, December 11, 2023. Janmohamed, R. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Zone Women's Ops Committee, hosted by IHOT, December 12, 2023. Brain, P. (Presenter), Peterson, A (Presenter),

Thompson, E (Facilitator).

- Peter Lougheed Centre OB Group, hosted by IHOT, December 13, 2023. Ekwalinga, P. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Rockyview General Hospital Anesthesia Grand Rounds, hosted by IHOT, February 23, 2023. Janmohamed, R. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Royal Alexandra Hospital Department Business Meeting, hosted by IHOT, March 1, 2023. Brain, P. (Presenter), Peterson, A (Presenter), Thompson, E (Facilitator).
- Rockyview General Hospital Site Meeting, hosted by IHOT, March 12, 2023. LeJour, C. (Presenter), Peterson, A (Presenter), Thompson, E (Facilitator).
- Rockyview General Hospital Nurses, hosted by IHOT, March 20, 2023. Janmohamed, R. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Misericordia physicians, hosted by IHOT, March 22, 2023. Janmohamed, R. (Presenter), Peterson, A (Presenter), Thompson, E. (Facilitator).
- Northern Lights Anesthesia and Nurses, hosted by IHOT, March 26, 2023. Brain, P. (Presenter), Peterson, A (Presenter), Thompson, E (Facilitator).

## Alberta Surgical Initiative – Reduction in clinical variation

- Tonsillectomy + Adenoidectomy Working Group. Session hosted by PLP on September 13, 2023. Hamilton, S, Nicholson, K, Sommer, R, & Blaak, J.
- Tonsillectomy + Adenoidectomy Working Group. Session hosted by PLP on November 21, 2023. Hamilton, S, Nicholson, K, & Blaak, J.
- Tonsillectomy + Adenoidectomy Working Group. Session hosted by PLP on April 14, 2023. Hamilton, S, Nicholson, K, Sommer, R, & Blaak, J.
- Day Surgery Optimization, Prostate Resection Working Group. Session hosted by PLP on October 3, 2023. Hamilton, S, Nicholson, K, & Blaak, J.
- Day Surgery Optimization, Prostate Resection Working Group. Session hosted by PLP on January 9, 2024. Hamilton, S, Nicholson, K, & Blaak, J.
- Day Surgery Optimization, Retained Ureteral Calculi Working Group. Session hosted by PLP on October 4, 2023. Hamilton, S, Nicholson, K, & Blaak, J.
- Day Surgery Optimization, Retained Ureteral Calculi Working Group. Session hosted by PLP on December 19, 2023. Hamilton, S, Nicholson, K, & Blaak, J.

## Optimizing Daily Laboratory Testing

- Foothills Medical Centre. Session hosted by PLP, May 8, 2023. Woodhouse, D (Presenter).
- University of Alberta Hospital. Session hosted by PLP, May 24, 2023. Woodhouse, D (Presenter).
- Red Deer Regional Hospital. Session hosted by PLP, May 26, 2023. Woodhouse, D (Presenter).
- Peter Lougheed Centre. Session hosted by PLP, June 21, 2023. Woodhouse, D (Presenter).



- Peter Lougheed Centre. Session hosted by PLP, June 29, 2023. Woodhouse, D (Presenter).
- Royal Alexandra Hospital. Session hosted by PLP, July 14, 2023. Woodhouse, D (Presenter).
- Sturgeon Community Hospital and Grande Prairie Regional Hospital. Session hosted by PLP, September 13, 2023. Woodhouse, D (Presenter).
- Foothills Medical Centre and Red Deer Regional Hospital. Session hosted by PLP, October 10, 2023. Woodhouse, D (Presenter).
- Misericordia Community Hospital and Grey Nuns Community Hospital. Session hosted by PLP, November 10, 2023. Woodhouse, D (Presenter).
- South Health Campus and Rockyview General Hospital. Session hosted by PLP, January 17, 2024. Woodhouse, D (Presenter).

## Other Acute Care Topics

- Addressing Variation in Radiology Prioritization. Session hosted by PLP on June 01, 2023. David, O (Presenter), Peterson, A (Facilitator).

## Respiratory Management in Primary Care

- Data to Decisions: a team-based approach for screening, diagnosis and management of Asthma and COPD with Mosaic PCN. Session hosted by PLP on April 26, 2023. Nicholson, K (Presenter), Oliver, D (Presenter), Qaiser, S, & Hirani, N.
- Breathe Easy: Choosing the right lung test for the right patient, hosted by PLP and Medicine SCN, Edmonton Southside PCN, Medicine Strategic Clinical Network, Edmonton Southside PCN, Medicine Strategic Clinical Network, PLP Calgary, April 4, 2023. Damant R, Tay J, Nicholson T (Presenters), Colleen Makarowsky (Panelist), Nicholson T (Moderator).
- A Breath of Fresh Air: Updates in Asthma and COPD for Primary Care: Diagnosis & Management of Asthma in Adults in Primary Care. Webinar series hosted by L3PLP, March 19, 2024. Bhutani M (Presenter), Desai N (Moderator).

## Mental Health in Primary Care

- Managing depression and anxiety in the community: An integrated treatment approach: Beyond DSM: individualized medicine. Webinar series hosted by L3PLP and Edmonton Southside PCN, September 27, 2023. Shapiro Y (Presenter), Campbell-Scherer D (Moderator).
- Managing depression and anxiety in the community: an integrated treatment approach: Working as a community team: a case based approach. Workshop + QI series hosted by L3PLP and Edmonton Southside PCN, October 11, 2023. Shapiro Y (Presenter), Duia S, Gauchier M, Jacek R. (Panelists), Campbell-Scherer D (Moderator).

## Other Primary Care Audit & Feedback, and Engagement Events

- Concussion Overview and Update: Updates to pediatric concussion care: The living guideline for pediatric concussion care & Improving concussion awareness and recognition in the community: Implications for physicians. Hosted by PLP on April 18, 2023. Dawson J, Cowle S (Presenters), Campbell-Scherer D (Moderator).
- Concussion Overview and Update: When symptoms do not resolve: what are our options for patients with concussion symptoms? Webinar series hosted by L3PLP, May 2, 2023. Lebrun C, De Freitas T (Presenters), Campbell-Scherer D (Moderator).

- Introducing MyPI to Mosaic PCN and Highland PCN. Session hosted by PLP on May 15, 2023. David, O (Presenter).
- Osteoporosis Treatment in Primary Care – What does the local data show? Session hosted by CME&PD of the Cumming School of Medicine, September 22, 2023. Woodhouse, D (Presenter), & Oliver, D (facilitator).
- Planting the seeds of engagement, innovation, and organizational learning: A northern Canadian tale of quality improvement. Webinar hosted by PLP and FoMD–UofA, Office of Lifelong Learning, November 23, 2023. D’Addario A, Campbell N, McPhee G, Bassett J, Fitzgerald S, (Presenters), Aziz K (Moderator).
- Household food insecurity: Navigating household food insecurity in primary care: A nutrition guideline. Webinar series hosted by L3PLP and AHS Strategic Clinical Networks, November 21, 2023. Lewanczuk R, Cheung K, McGhan S (Presenters), Campbell-Scherer D (Moderator).
- Household food insecurity: Strengthening foundations for patients facing household food insecurity: Experience of a Primary Care Network. Webinar series hosted by L3PLP and AHS Strategic Clinical Networks, November 30, 2023. Cheung K, Smoole L, Ojedokun J, McGhan S (Presenters), Lewanczuk R (Panelist), Campbell-Scherer D (Moderator).
- Hit the road Hep C and don’t you come back no more: Screening In Primary Care. Webinar series hosted by Edmonton North PCN, February 28, 2024. Rose M (Presenter), Tandon P (Moderator).
- Hit the road Hep C and don’t you come back no more: Managing and Referral in Primary Care. Webinar series hosted by Edmonton North PCN, March 5, 2024. Rose M (Presenter), Tandon P (Moderator).
- Enhancing screening for breast, colorectal and cervical cancer with the Rural Virtual Conference Series. Session hosted by PLP on March 5, 2024. David, O (Presenter), Nicholson, K (Presenter).

## Diabetes Management

- Ketogenic diet for diabetes and weight management. Webinar hosted by L3PLP and Division of Endocrinology & Metabolism UofA, November 22, 2023. Chan C, Richard C, Yeung RO (Presenters).
- To pump or not to pump? A discussion on automated pancreas systems in pregnancy. Webinar hosted by L3PLP and Division of Endocrinology & Metabolism UofA, January 22, 2024. Lucciantonio R, Yeung R (Presenters), Yeung R (Moderator).
- Remission is possible: A new way to think about type 2 diabetes. Webinar hosted by L3PLP and Division of Endocrinology & Metabolism UofA, February 23, 2024. Byrne B (Presenter), Yeung R (Moderator).
- Gestational diabetes online cafe. Webinar hosted by L3PLP, March 9, 2024. Nagpal, T (Presenters), Yeung R (Panelist).

## Pediatric Neurodevelopmental Disorders

- Following the spark: Actionable strategies to untangle the complexities of neurodevelopmental disorders: Recognizing, diagnosing, and caring for autism and neurodevelopmental conditions. Webinar series hosted by L3PLP and PRISMA, February 22, 2024. Zwaigenbaum L, Kelm K (Presenters), Kelm K (Moderator).
- Following the spark: Actionable strategies to untangle the complexities of neurodevelopmental disorders: Precision medicine and genetic recommendations after a diagnosis of autism and neurodevelopmental conditions. Webinar series hosted by L3PLP and PRISMA, February 29, 2024. Moreno De Luca D, Kelm K (Presenters), Kelm K (Moderator).

- Following the spark: Actionable strategies to untangle the complexities of neurodevelopmental disorders: Navigating unique care needs across the lifespan: Perspectives in adult care and First Nations families. Webinar series hosted by L3PLP and PRISMA, March 7, 2024. Orimalade A, Bardoloi P, Bruno G (Presenters), Kelm K (Moderator).
- Following the spark: Actionable strategies to untangle the complexities of neurodevelopmental disorders: Panel discussion: Supporting individuals, families and care providers. Webinar series hosted by L3PLP and PRISMA, March 14, 2024. Zwaigenbaum L, Moreno De Luca D, Orimalade A, Bardoloi A, Bruno G, Noyes M, Rossi M, Hahn-Sidor B (Presenters), Kelm K (Moderator).

## Women's Health

- Postpartum hemorrhage (PPH): No denial, No delay - The Alberta interprofessional toolkit: Adopting a standardized approach to PPH identification and management in Alberta. Webinar series hosted by L3PLP and Alberta Health Services, December 7, 2023. Cooper S, DeVetten G (Presenters), Campbell-Scherer D (Moderator).
- Postpartum hemorrhage (PPH): No denial, No delay - The Alberta interprofessional toolkit: Management of severe postpartum hemorrhage. Webinar series hosted by L3PLP and Alberta Health Services, December 14, 2023. Cooper S, Birch C (Presenters), Campbell-Scherer D (Moderator).
- Postpartum hemorrhage (PPH): No denial, No delay - The Alberta interprofessional toolkit: Putting it all together - Perspectives on postpartum hemorrhage. Webinar series hosted by L3PLP and Alberta Health Services, December 19, 2023. Richardson K, Zakresky J, Brain P (Presenters), Campbell-Scherer D (Moderator).

# Publications & Presentations

## Publications

Ambasta A, Omodon O, Herring A, Ferrie L, Pokharel S, Mehta A, Liu L, Hews-Girard J, Tam C, Taylor S, Lonergan K, Faris P, Duncan D, **Woodhouse D**. Routine Laboratory Test in Hospitalised Medical Patients (RePORT): results of a cluster randomised stepped-wedge quality improvement study. *BMJ Quality and Safety*, 2023;O:1-9. doi:10.1136/bmjqs-2022-015611.

**Campbell-Scherer DL**. New insights and future directions: the importance of considering poverty in studies of obesity and diabetes. *Annals of Family Medicine*, 2023;21(3): 205-6. doi: 10.1370/afm.2983

Hyde AM, Johnson E, Luig T, Schroeder D, Carbonneau M, **Campbell-Scherer D, Tandon P**. Implementing a cirrhosis order set in a tertiary healthcare system: a theory-informed formative evaluation. *BMC Health Services Research*, 2023;23(636): 1-12. [doi.org/10.1186/s12913-023-09632-z](https://doi.org/10.1186/s12913-023-09632-z)

Johnson E, Hyde AM, Drager D, Carbonneau M, Bain V, Kowalcewski J, **Tandon P**. Collaborating with patients and caregivers to create web-based educational resources for people living with cirrhosis. *PEC Innovation*, 2023;3. [doi.org/10.1016/j.pecinn.2023.100201](https://doi.org/10.1016/j.pecinn.2023.100201)

Laur C, Ladak Z, Hall A, **Solbak NM**, Nathan N, Buzuayne S, Curran A, Shelton RC, Ivers N. Sustainability, spread, and scale in trials using audit and feedback: a theory-informed, secondary analysis of a systematic review. *Implementation Science*, 2023;18(1):54 [doi: 10.1186/s13012-023-01312-0](https://doi.org/10.1186/s13012-023-01312-0)

Lofters A, Khalil L, Shea-Budgell M, Meaney C, Sopcak N, Fernandes C, Moineddin R, **Campbell-Scherer D**, Aubrey-Bassler K, **Manca D**, Grunfeld E. Opportunities to Improve Quality of Care for Cancer Survivors in Primary Care: Findings from the BETTER WISE Study. *Supportive Care in Cancer*, 2023;31(7): 430. [doi: 10.1007/s00520-023-07883-4](https://doi.org/10.1007/s00520-023-07883-4)

Luig T, **Ofosu NN**, Chiu Y, Wang N, Omar N, Yip L, Aleba S, Maragang K, Ali M, Dormitorio I, Lee KK, **Yeung RO, Campbell-Scherer DL**. The role of cultural brokering in advancing holistic primary care for diabetes and obesity: a participatory qualitative study. *BMJ Open*, 2023;13(9): 1-12. [dx.doi.org/10.1136/bmjopen-2023-073318](https://dx.doi.org/10.1136/bmjopen-2023-073318)

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**Woodhouse D**, & Hardy, B. Addressing care gaps in anticoagulation therapy through a virtual workshop. Choosing Wisely Canada National Meeting Abstract Book, 2023.

## Conference Presentations

**Boisvenue JJ**, Gibson K, Hinz H, Young K, **Yeung RO**. From ideas to impact: learning from the reshape1d study in amplifying patients and clinicians as partners in research co-design and integrated knowledge translation. Oral presentation delivered at the 2023 Northwest SPOR Collaborative Forum –Calgary, Canada on October 3, 2023.

**Boisvenue JJ**, Masters-Gonzales J, Spiers J, Zörgő S, **Yeung RO**. Feasibility of using artificial intelligence tools for delegation of transcription of qualitative semi-structured interviews: an independent assessment of data protection and privacy risk to research participants.” Poster presentation delivered at the International Conference for Quantitative Ethnography 2023 –Melbourne, Australia on October 8, 2023.

**Burak K**, **Law S**. Choosing Wisely in Gastroenterology: From conversations to changing behaviour! Choosing Wisely STARS Lunch and Learn for University of Calgary Medical Students – Calgary, AB on March 15, 2024.

**Butalia S**. A co-created patient support tool for cholesterol management: let's talk cholesterol at the meeting of the Canadian diabetes epidemiology group - Montreal, QC on October 25, 2023.

**Butalia, S**. 2024, February 23). Let's talk cholesterol: co-creation of tools in the digital age. City Wide Endocrinology Rounds, University of Toronto, Toronto, Quebec on February 23, 2024.

**Campbell-Scherer D.** Advancing primary care: What information infrastructure is needed to meet the future? Invited presentation delivered at the Optimizing Alberta's Learning Health System (OAHLS) —Calgary, Canada on June 5, 2023.

**Campbell-Scherer D.** Why weight? What you need to know about the Canadian adult obesity clinical practice guidelines: An overview of this patient-centred framework for healthcare professionals, patients, and policy makers. Plenary delivered at the National Lymphedema Conference —Toronto, Canada on November 3, 2023.

**Campbell-Scherer D, Heatherington M.** The 5As Team approach to holistic obesity assessment and management. Workshop delivered at the National Lymphedema Conference —Toronto, Canada on November 4, 2023.

**Campbell-Scherer D,** Williams S, Butsch S, Wharton S, Pearce N, Clare K. Advancing person-centered obesity care through education globally. Workshop delivered at the European Congress on Obesity —Dublin, Ireland on May 19, 2023.

**Hardy B, Woodhouse D.** Addressing care gaps in anticoagulation therapy through a virtual workshop. Choosing Wisely Canada meeting abstract book, 2023.

**Kelm K.** How are patients shaping Canada's rare disease ecosystem and driving advances in rare disease diagnosis, care and treatment? Invited presentation delivered at the CORD (Canadian Organization for Rare Diseases) Canada's Rare Disease Network: 2023 Conference —Calgary, Canada on November 29, 2023.

**Kelm K,** Au B, Murias, K, Wilcox G. You've got this! Supporting individuals with neurodevelopmental disorders in the classroom with meaningful strategies and insights. Oral presentation delivered at the Calgary Teachers Convention —Calgary, Canada on February 15, 2024.

**Kelm K,** Barber T, **Campbell-Scherer D,** Bolduc FV. Innovative insights into Fragile X syndrome a modern approach in rare disease investigations. Poster presentation delivered at the Kids Brain Health Network —Ottawa, Ontario on October 23, 2023.

Lofters A, Khalil L, Sopcak N, Shea-Budgell M, Meaney C, Fernandes C, Moineddin R, **Campbell-Scherer D,** Aubrey-Bassler K, **Manca D,** Grunfeld E. Opportunities to Improve Quality of Care for Cancer Survivors in Primary Care: Findings from the BETTER WISE Study. Poster presentation delivered virtually at the Multinational Association of Supportive Care in Cancer —Nara, Japan on June 22, 2023.

**Manca DP,** Fernandes C, Aubrey-Bassler K, Lofters A, **Campbell-Scherer D,** Shea-Budgell M, Wong T, Latko K, Cheung H. Improving cancer surveillance for breast, colorectal, and prostate cancer: Actionable recommendations for the BETTER Program. Accepted for Poster presentation at the 51st NAPCRG Annual Meeting.

**Nicholson K, Oliver D,** Lau D, Girard L. Cardiorenal protection QI workshop – Optimizing SGLT2 for people with diabetes. Workshop presented at the University of Calgary Therapeutics Conference – virtual, on April 22, 2023.

**Solbak N, Peterson A.** Less is best: Provincial spread of bronchiolitis appropriate care in Alberta, Oral Presentation at Choosing Wisely Canada National Meeting, Toronto, ON on May 12, 2023.

**Solbak N,** Thompson E, Bailey M, Long L, Thomas D, Peterson A, Johnson D. (2023). Less is best: Provincial spread of bronchiolitis appropriate care in Alberta. Presented at the Institute for Healthcare Improvement Forum 2023 - Orlando, FL, USA on December 11, 2023.

**Tandon P.** Cirrhosis Care Alberta - Lessons Learned. Invited presentation delivered at the Red Deer Gastrointestinal Event –Red Deer, Canada on May 16, 2023.

**Tandon P.** Cirrhosis Care Updates. Invited presentation delivered at the INASL (Indian National Association for the Study of the Liver) –Bhubaneswar, India on August 4, 2023.

**Tandon P.** Cirrhosis Care Alberta - Updates in Cirrhosis Care. Invited presentation delivered virtually at the Peter Lougheed Centre (PLC) –Calgary, Canada on June 7, 2023.

**Woodhouse D,** Ferrie L, Omodon O, Duncan D, Kaba A, Mehta A, Ambasta A. Barriers and facilitators to appropriate use of routine laboratory tests. Oral presentation at Choosing Wisely Canada, Toronto, May 11, 2023.

**Woodhouse D,** Ferrie L, Omodon O, Duncan D, Kaba A, Mehta A, Ambasta A. Barriers and Facilitators to Appropriate Use of Routine Laboratory Tests. Oral presentation at Choosing Wisely Canada - Toronto, ON on May 11, 2023.

**Woodhouse D,** Howk S. Physician Practice Improvement Program and support for success. Rural Virtual Conference Series – virtual on May 16, 2023.

## Stakeholder Presentations

Bailey M. Reducing low-value care in bronchiolitis management: a provincial initiative. Session hosted by Alberta Children’s Hospital STEP ED Day, September 18, 2023.

Bailey M. Reducing low-value care in bronchiolitis management: a provincial initiative. Session hosted by Alberta Children’s Hospital STEP ED Day, September 28, 2023.

Bailey M. Bronchiolitis: Less is best – grand rounds presentation. Session hosted by Quebec Grand Rounds on March 25, 2024

Burak K, Law S. Choosing Wisely. Presentation to the Alberta International Medical Graduate Program, University of Calgary - Calgary, AB on April 21, 2023.



Burak K, Law S. Audit & Feedback: An Alberta experience. Oral presentation at Choosing Wisely Canada - Toronto, ON on May 11, 2023.

Burak K. My Practice Improvement. CME&PD Faculty Committee. Calgary, AB on April 26, 2023.

Burak K, Blaak J. My practice improvement - Understanding physician practice improvement at Tom Baker Cancer Centre grand round - Calgary, AB on June 21, 2023.

Sanguinetti JM, Burak K. Competencia y Entrenamiento (Spanish) [Competency and Training - PLP dyspepsia project and Calgary audit and feedback framework] at world gastroenterology organisation train the trainers program - Pereria, Colombia on August 17, 2023.

Burak K. My Practice Improvement - supporting practice improvement. Department of anesthesia city wide rounds - Calgary, AB on November 17, 2023.

Butalia S. Let's talk cholesterol: A co-created patient support tool for cholesterol management at Alberta precision laboratory/Calgary quarterly meeting - virtual in Calgary, Alberta on July 11, 2023.

Butalia S. Let's talk cholesterol: A co-created patient support tool for cholesterol management at Alberta precision laboratory lipid panel projects - virtual in Alberta on July 20, 2023.

Butalia S. Let's talk cholesterol: Co-creation of tools in the digital age. City wide endocrinology rounds at university of Toronto - virtual in Toronto, ON on February 23, 2024.

Butalia S. Let's talk cholesterol. Rural video conference series, continuing medical education and professional development, Cumming school of medicine at university of Calgary - virtual in Calgary, AB on February 27, 2024.

Brain P, Peterson A, Thompson E. Reducing type & screen as standard order for elective c-sections - presentation to foothills medical center site champions, hosted by IHOT, November 14, 2023.

Brain P, Peterson A, Thompson E. Reducing type & screen as standard order for elective c-sections - presentation to grande prairie site champions, hosted by IHOT, October 26, 2023.

Long L. Less is best x STEP team. Session hosted by Alberta Children's Hospital on September 18, 2023

Long L, Solbak, N. Lunch & Learn: Bronchiolitis & room air trial. Session hosted by AHS IHOT and PLP, November 17, 2023.

Long L, Solbak N. Lunch & Learn: Bronchiolitis & room air trial. Session hosted by AHS IHOT and PLP, November 20, 2023.

Sinclair A, Yeung RO. Presenting the adrenal insufficiency toolkit at CAR grand rounds to the endocrinology division, University of Alberta, January 23, 2024.



Solbak N, Thomas D. Emergency SCN Leadership working group presentation, Session hosted by AHS Emergency SCN on November 23, 2023.

Thomas D. Bronchiolitis update to Stollery quality & safety council. Session hosted by Stollery Quality & Safety Council on April 05, 2023

Thull-Freedman J, Peterson A. Em practice improvement tool steering committee. Hosted by Emergency SCN on June 20, 2023.

Thull-Freedman J, Peterson A. PLP support of em practice improvement dashboard - small working group. Hosted by Emergency SCN on July 19, 2023.

Thull-Freedman J, Peterson A. PLP support of em practice improvement dashboard - small working group. Hosted by Emergency SCN on September 8, 2023.

Woodhouse D, Ambasta A. Re-purposing the ordering of routine laboratory tests in hospitalized medical patients (RePORT): Results of a cluster randomized stepped-wedge quality improvement study. Oral presentation at International Audit and Feedback MetaLab – Toronto, ON on October 23, 2023.

## Grants

PLP Calgary received a Choosing Wisely Canada grant to explore Assessing the variation in antipsychotics, antidepressants, and sedative prescribing to seniors: A pan-provincial review of low value prescribing in Alberta and Saskatchewan.

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