

# 3-Year Implementation Outcomes of the Pharmacists in PCN Program in British Columbia



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# PRESENTER DISCLOSURE

**Presenter: Dr. Arwa Nemir**

**Relationships with financial sponsors:**

 **Any direct financial relationships, including receipt of honoraria:**

None.

 **Membership on advisory boards or speakers' bureaus:**

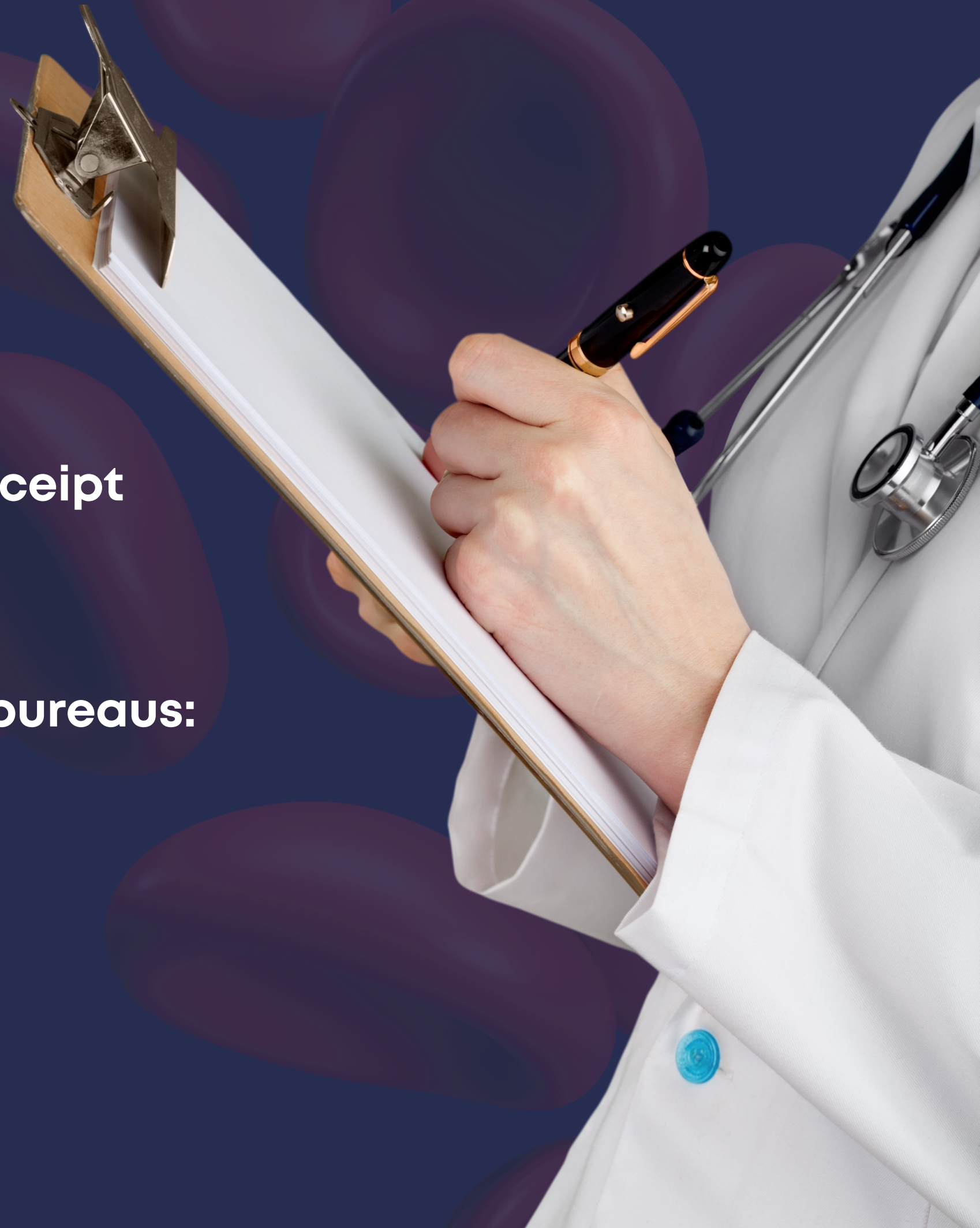
None.

 **Patents for drugs or devices:**

None.

 **Other:**

None.



# DISCLOSURE OF FINANCIAL SUPPORT



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**This program did not receive any in-kind support**



**Potential for conflict(s) of interest:**

**None**

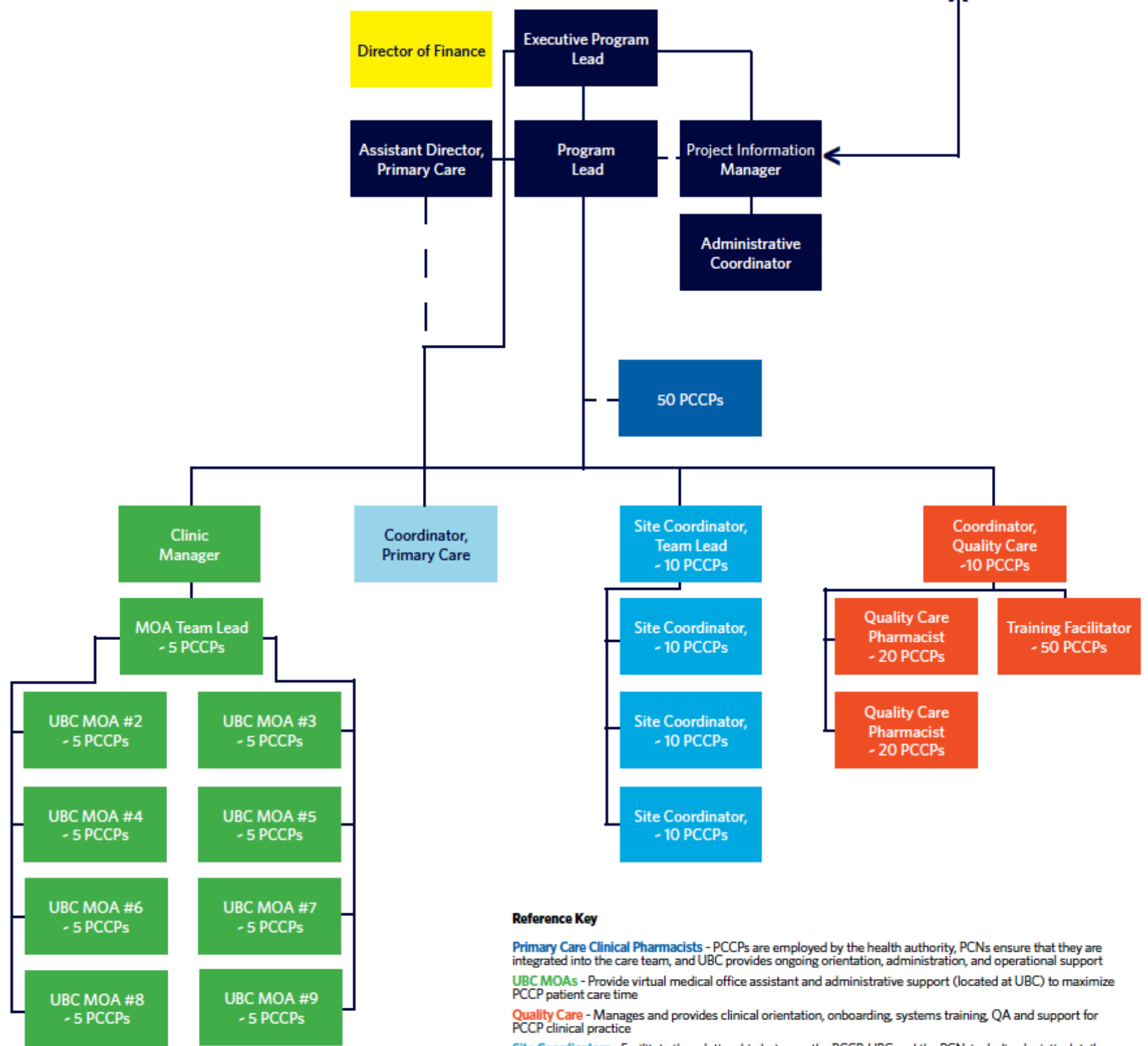
# Background

- Pharmacist integration into primary care practice has progressed nationally and internationally over the past couple of decades, but not in British Columbia as of **2020**.
- The UBC Faculty of Pharmaceutical Sciences conceived, developed and led the 3-year implementation of the Pharmacists in Primary Care Network (PCN) Program with regional health authorities and PCNs across BC.
- Program implementation occurred October 1, 2020 - September 30, 2023.



# Functional Organizational Chart

The distribution of people in these roles by PCCP is available in the Program Distribution and Master Contact Information document. For more information about other program roles, please refer to the Program Directory on the Pharmacists in PCN Program Website - <https://pharmacistsinpcn.ubc.ca/news/meetpharmacists-primary-care-network-pcn-program-team>



**Reference Key**

**Primary Care Clinical Pharmacists** - PCCPs are employed by the health authority, PCNs ensure that they are integrated into the care team, and UBC provides ongoing orientation, administration, and operational support

**UBC MOAs** - Provide virtual medical office assistant and administrative support (located at UBC) to maximize PCCP patient care time

**Quality Care** - Manages and provides clinical orientation, onboarding, systems training, QA and support for PCCP clinical practice

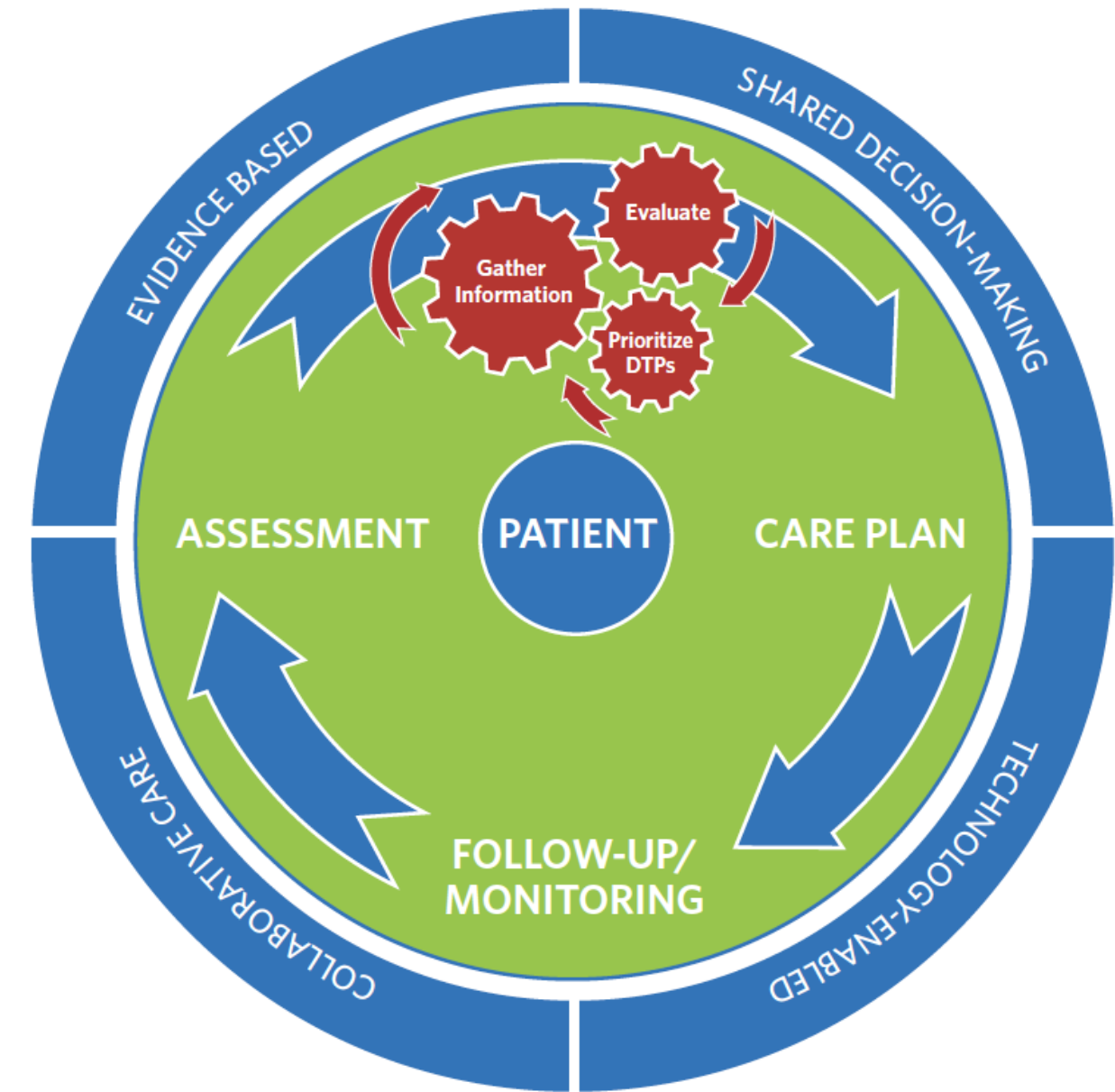
**Site Coordinators** - Facilitate the relationship between the PCCP, UBC and the PCN, including logistic details, referral processes, communication tools and issues management

**Coordinator, Primary Care** - Facilitate the engagement with community pharmacy stakeholder to enable shared patient care between PCCPs and community pharmacies

**Solid Line** - Direct Report    **Dashed Line** - Functional Oversight

# Practice Innovation Model

- Program aimed to integrate PCCPs into interprofessional team-based primary care model in PCNs throughout BC
- PCCPs were integrated with a primary role to provide patient-centred care to:
  - identify and resolve drug therapy problems (DTPs)
  - optimize medications
  - improve health outcomes for patients



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## Goal

To understand how the **implementation** processes and clinical care provided by the Pharmacists in PCN Program impacted user experience, satisfaction and quality of care **outcomes** when receiving care from a PCCP as a member of an interprofessional team within a PCN in BC.



## EVALUATION PLAN

Pharmacists in Primary Care Network (PCN) Program



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# Evaluation Methods

- Data prospectively collected in the context of routine care in OSCAR EMR which captured all patient information and documentation for all appointments.
- Data was de-identified and extracted from OSCAR by the Canadian Primary Care Sentinel Surveillance Network (CPCSSN). All data fields were available for evaluation.
- UBC CREB Certificate: H22-0371



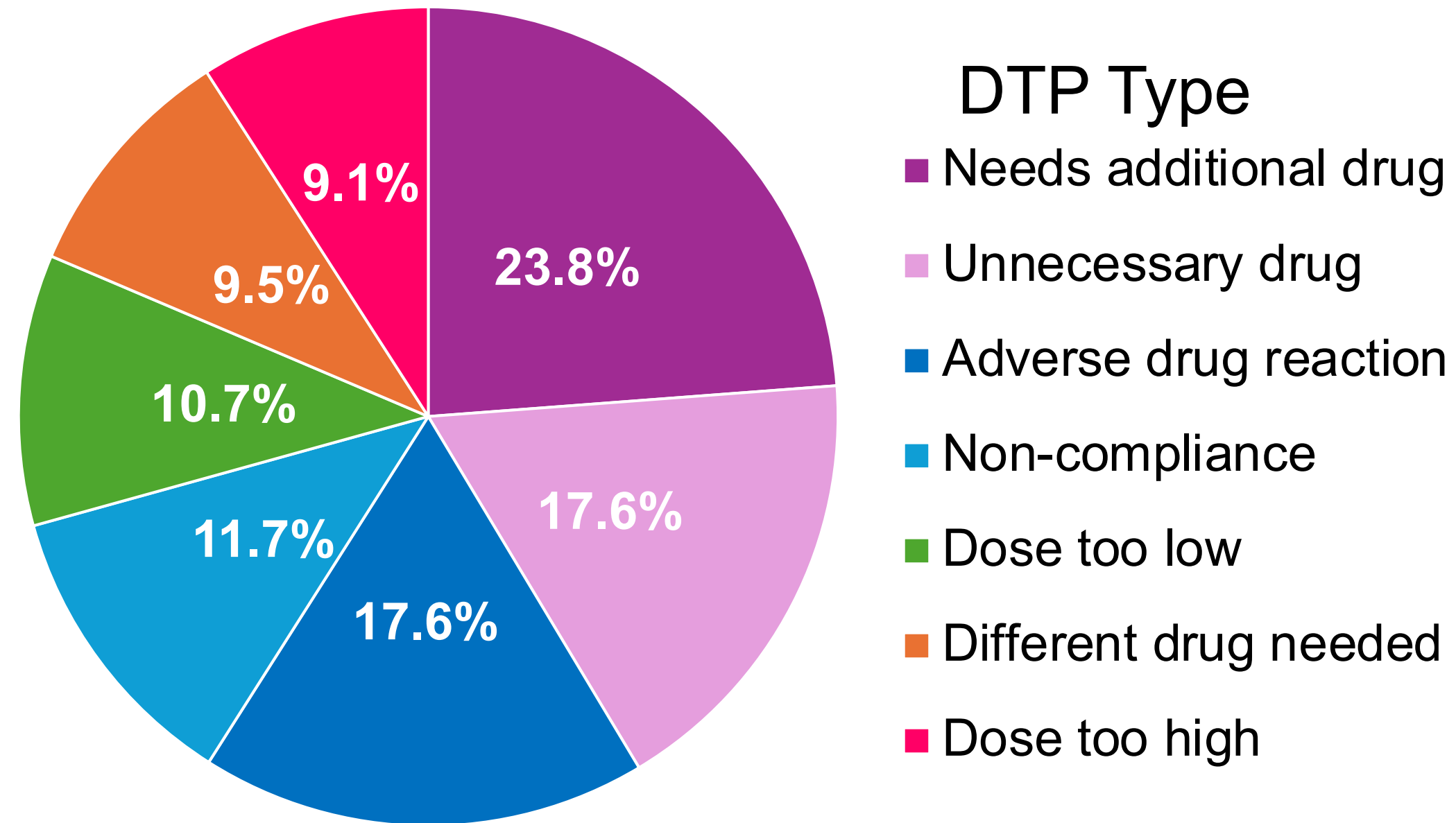
# Implementation Outcomes

- **59** PCCPs integrated into **47** PCNs over the 3-year implementation period.
- Median duration (range) a PCN had a PCCP integrated: 82 weeks (9-134 weeks).
- Model of Care: blended 37 (78.7%), hub and spoke 7 (14.9%) and co-location 3 (6.4%).
- Patient appointments: 24,098 (7,456 initial, 16,642 follow-up).



# Implementation Outcomes (Continued)

- 30,085 DTPs were identified which required intervention, monitoring or education.



**Drug Therapy Problems by Type**



# Evaluation Methods

## Interviews/Focus Groups

### UBC Program Team Interviews (6)

- Executive Lead, Program Lead, Project and Information Manager, Site Coordinator Lead, Medical Office Assistant Lead, Primary Care Coordinator

### UBC Program Team Focus Groups (3)

- Medical Office Assistants (6), Site Coordinators (2), Quality Care Team (3)

### Health Authority Representative Interviews (4)

### Primary Care Clinical Pharmacists Focus Groups (4)

- Vancouver Coastal (7), Fraser (5), Island (6), Interior/North (7)

### PCN Administrators Interviews (13)

### PCN IPT Members Interviews (12)

### PCN Prescriber Interviews (11)

### Patient Focus Groups (5)

- Vancouver Coastal/Fraser (6+10), Island (8+10), Interior/North (5)

## Surveys [N (Response Rate)]

1. Patients [787 (29.0%)]
2. Pharmacists I [28 (73.7%)]
3. Pharmacists II [18 (56.3%)]
4. PCN Administrators [51 (65.4%)]
5. PCN IPT Members [96 (70.6%)]
6. Community Pharmacists [66]



# Patient Perspectives

- Most Appreciated Aspects of the Program:
  - **Patient-centered** care
  - PCCPs were easily **accessible**
  - **Flexibility** in care provision

*“One of the really important things was that I felt like I was the center focus of his time. He [PCCP] was really listening to me and really understanding what I was trying to say. It was just a great experience to have somebody who could connect that quickly with somebody that you do not know.”*  
[Participant 4 in Patient Focus Group #2]

Patient perceptions and experiences receiving care from pharmacists in team-based primary care in British Columbia

Arwa Nemir, BSc(Pharm), PharmD, MSc; Anupama Salil, MPH;  
Anita I. Kapanen, MSc, PhD<sup>ID</sup>;  
Peter J. Zed, BSc, BSc(Pharm), ACPR, PharmD, FCSHP<sup>ID</sup>



ARWA NEMIR

We are deeply committed to amplifying patients' voices by navigating their experiences while receiving pharmacist care to identify gaps and opportunities for improvement and inform practice change. Understanding how patients perceive, access, and interact with pharmacists is essential for optimizing the delivery of patient-centred care.

Nous sommes profondément engagés à amplifier la voix des patients en analysant leurs expériences lorsqu'ils reçoivent des soins pharmaceutiques afin d'identifier les lacunes et les possibilités d'amélioration et de promouvoir les changements de pratiques. Il est essentiel de comprendre comment les patients perçoivent les pharmaciens, comment ils y ont accès et comment ils interagissent avec eux afin d'optimiser la prestation de soins axés sur le patient.

## ABSTRACT



**Background:** The University of British Columbia Faculty of Pharmaceutical Sciences led the 3-year implementation of the Pharmacists in Primary Care Network (PCN) Program in collaboration with regional health authorities and PCNs across British Columbia (BC). Primary care clinical pharmacists (PCCPs) were integrated into 47 PCNs from October 1, 2020 to September 30, 2023. Our study aimed to describe the experiences of patients after receiving care from a PCCP as a member of the interprofessional team in PCNs.

**Methods:** This study was conducted as part of the program evaluation and was informed by qualitative description methodology to produce themes. Patients who had 2 or more appointments with a PCCP were randomly selected to participate, with

representation stratified by health authority and PCN location.

**Results:** We interviewed 39 patients who participated in 6 focus groups across 5 BC health authorities. Patients perceived positive changes in health management since working with PCCPs owing to their PCCP's support with comprehensive medication reviews, patient education, and empowerment. Patients also appreciated their PCCP's patient-centred approach, specialized knowledge, professionalism, and flexibility. Patients felt there was insufficient public awareness about the program and the PCCP role. Some patients also criticized having the family physician or nurse practitioner as the sole access point to the PCCP.

**Interpretation and conclusion:** Patients' experiences were overall positive after receiving care from a PCCP. Patients recommended promoting the program directly through social media, posters, newsletters, and billboards. In addition, self-referral and referrals from any health care provider within the PCN to PCCPs would enhance accessibility and optimize service uptake. *Can Pharm J (Ott)* 2025;158:xx-xx.

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# Conclusion

- The 3-year implementation of the Pharmacists in PCN Program was supported by:
  - effective centralized administration and support from UBC
  - effective collaboration between UBC, health authorities and PCNs
- The Program successfully integrated the first cohort of PCCPs into team-based primary care in BC which established the foundation for longer term growth and sustainability.
- Patients' experiences with PCCPs were overwhelmingly positive:
  - Changes in health management for chronic conditions
  - Confidence in PCCP services
  - Shared-decision-making and bidirectional discussions
  - Feeling empowered by the PCCPs to advocate for themselves



# Evaluation Team

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# Acknowledgements



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# Interested to know more about the Pharmacists in PCN Program?

- **Nemir A**, Salil A, Kapanen AI, Zed PJ. Patient perceptions and experiences receiving care from a pharmacist in team-based primary care model. Can Pharm J (Ott) 2025;158. published on-line ahead of print November 5, 2025 <http://doi.org/10.1177/17151635251380295>
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- Zed PJ, Loewen PS, Kapanen AI, **Nemir A**, Salil A. Pharmacists in Primary Care Network Program: Practice innovation in British Columbia. Can Pharm J (Ott) 2025;158:265-9. published on-line ahead of print July 23, 2025 <https://doi.org/10.1177/17151635251353242>



# THANK YOU!

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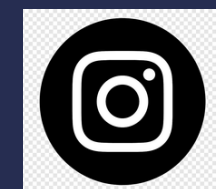
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