



# Empowering Pharmacists, Empowering Patients: Pathways to Better Cardiovascular Care and Outcomes

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**UNIVERSITY  
OF ALBERTA**

Faculty of Medicine & Dentistry

Department of Medicine

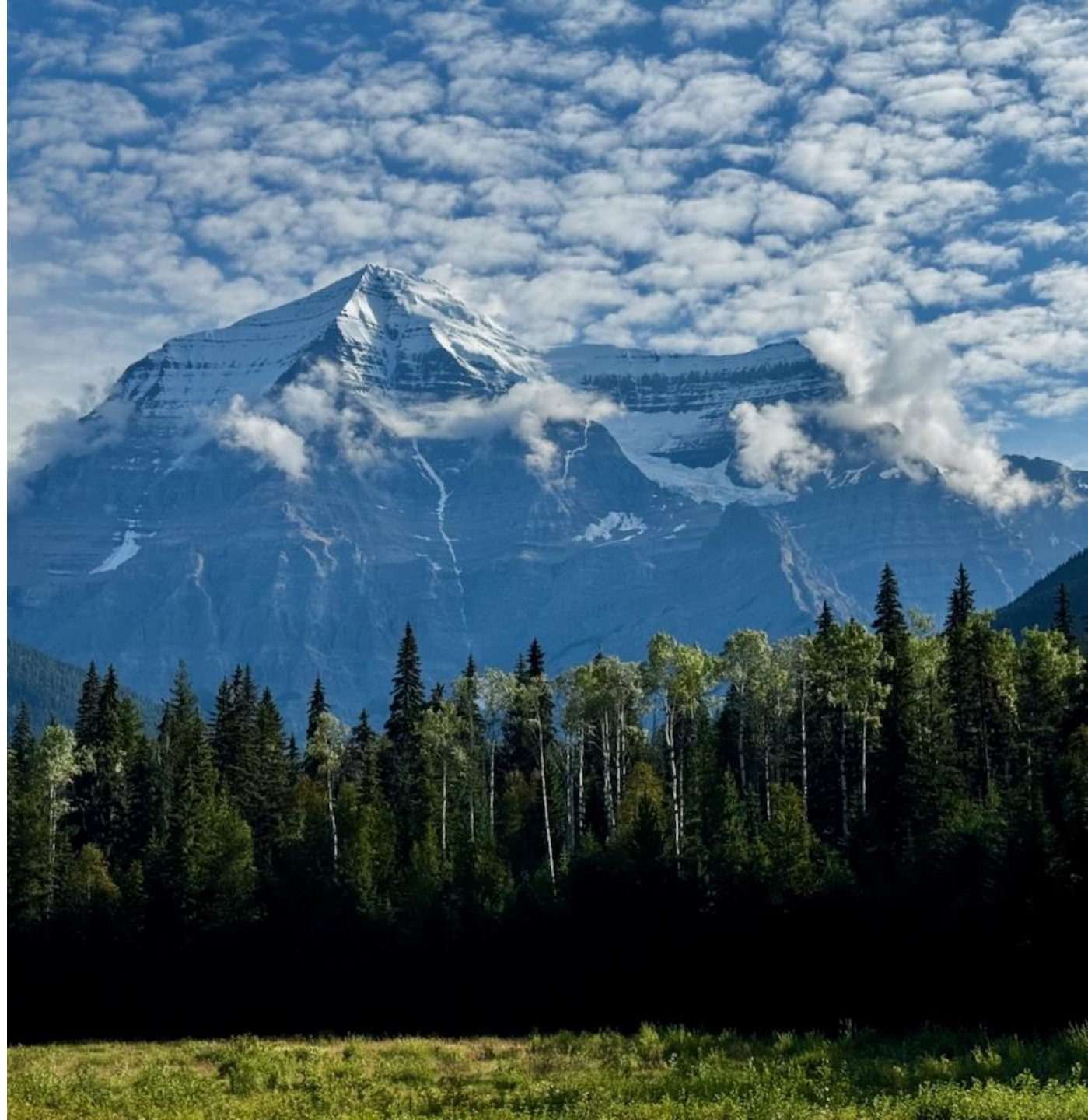
# Disclosures: Prof. Ross Tsuyuki



- Investigator-initiated, arm's length research grants from Merck, Sanofi, AstraZeneca and Pfizer
- Consulting: Shoppers Drug Mart, Merck, Emergent Biosolutions, BeOne Medical.
- Editor-in-Chief, Canadian Pharmacists Journal/Revue des pharmaciens du Canada
- Past President, Hypertension Canada (volunteer position)

# Outline

- Introduction: Pharmacy in Canada and Alberta
- Evidence for pharmacist prescribing and care in hypertension/ cardiovascular risk reduction
- Implementation:
  - What we have learned
  - What we are doing



# Canada



# Healthcare in Canada



- Canada Health Act: “...universal, comprehensive coverage for medically necessary hospital and physician services.”
- Healthcare is funded federally, but administered provincially
  - 13 different healthcare systems
- Pharmacy services/scope of practice differs by province

## PHARMACISTS' SCOPE OF PRACTICE IN CANADA

		BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL	YT	NWT	NU
Prescriptive Authority (Schedule 1 Drugs)	Independently, for any Schedule 1 drug	X	✓ <sup>4</sup>	X	X	X	X	X	X	X	X	X	X	X
	In a collaborative practice setting/agreement	X	✓ <sup>4</sup>	✓ <sup>4</sup>	✓ <sup>4</sup>	X	✓	✓	✓	X	X	X	X	X
Initiate <sup>1,2</sup>	For minor ailments/conditions	✓	✓	✓	✓ <sup>4</sup>	✓	✓	✓	✓	✓ <sup>4</sup>	✓	✓	X	X
	For smoking/tobacco cessation	✓	✓	✓	✓ <sup>4</sup>	✓	✓	✓	✓	✓ <sup>4</sup>	✓	✓	X	X
	In an emergency	✓ <sup>6</sup>	✓	✓ <sup>6</sup>	✓ <sup>7</sup>	✓	✓	✓	✓	✓	✓ <sup>6</sup>	✓ <sup>6</sup>	X	X
Adapt/Manage <sup>1,3</sup>	Make therapeutic substitution	✓	✓	✓ <sup>8</sup>	X	X	✓ <sup>15</sup>	✓	✓	✓	✓	✓	X	X
	Change drug dosage, formulation, regimen, etc.	✓	✓	✓ <sup>8</sup>	✓	✓	✓	✓	✓	✓	✓	✓	X	X
	Renew/extend prescription for continuity of care	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Injection Authority (SC or IM) <sup>1,4</sup>	Drugs <sup>5</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
	Vaccines <sup>5</sup>	✓	✓	✓	✓	✓	✓ <sup>16</sup>	✓	✓	✓	✓	✓	X	X
	Influenza vaccine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X
Labs	Order and interpret lab tests	✓	✓	P <sup>9</sup>	✓ <sup>10</sup>	X	✓	P <sup>11</sup>	P <sup>9,12</sup>	✓ <sup>13</sup>	X	X	X	X
Techs	Regulated pharmacy technicians	✓	✓	✓	✓ <sup>14</sup>	✓	✓	✓	✓	✓	✓	X	X	X

# Pharmacy Practice in Canada

- Education: 6 year Doctor of Pharmacy (PharmD) degree as the entry-level degree
  - Residency training (1-2 years) for hospital pharmacy
- Scope of practice for pharmacy differs by province/territory
- In Alberta, pharmacists can view:
  - All medications dispensed
  - All laboratory tests
  - Medication reviews performed by pharmacists
  - Hospital discharge summaries
  - Soon: a province-wide single electronic health record, Connect Care (Epic)

# Full Scope of Pharmacy Practice



## Injections

- Immunizations
- Travel medicine
- Other injectable medications



## Prescribing

- Refill authorization
- Adaptation
- Independent prescribing
- Deprescribing



## Laboratory Tests

- Lab tests
- Point of care testing
- diagnostic testing (e.g., pulmonary function testing)



## Disease Management

- Screening
- Prevention
- Chronic diseases
- Acute (common ambulatory) conditions

• Supported by evidence

• Preferred by patients



# Pharmacist Prescribing in Alberta



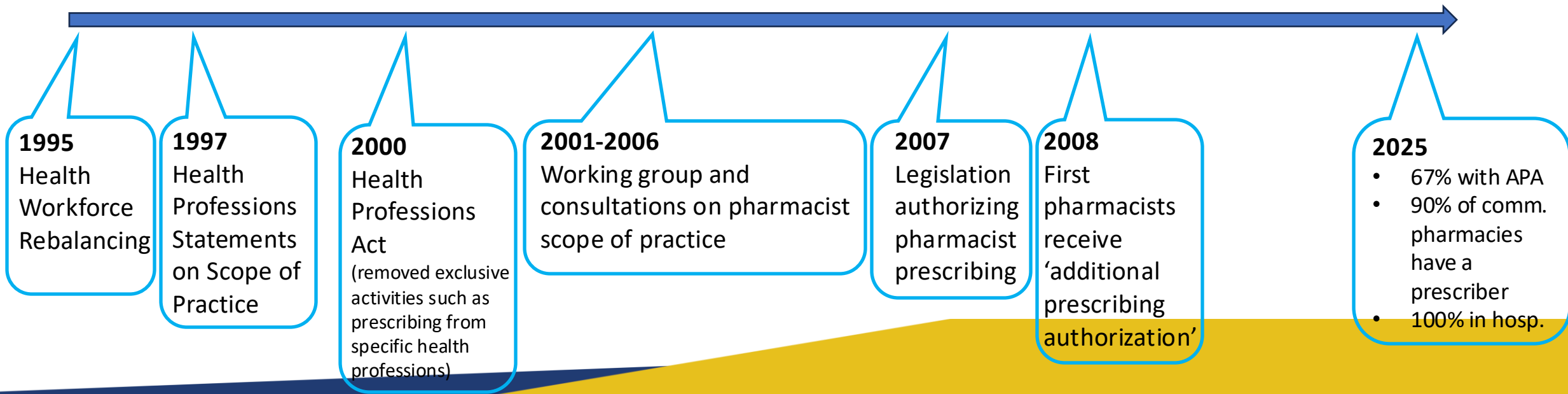
- Alberta pharmacists with at least 1 year of practice experience can apply for Additional Prescribing Authorization (APA)
- Pharmacists with APA can prescribe Schedule 1 drugs (“prescription only”) for patients after conducting a complete patient assessment
  - Can prescribe any drug in their area of competence (except for narcotics and controlled drugs such as benzodiazepines – federally regulated)
  - Independent of a physician

# Pharmacist Prescribing in Alberta

- If a pharmacist chooses to prescribe a drug for a patient, they become legally responsible for the outcomes of that prescribing decision
- Whenever a pharmacist prescribes, they are required to inform the patient's other care providers of their action to ensure continuity of care
- Pharmacists who prescribe must have a follow-up plan in place to monitor the outcome of the prescription
- If you choose to prescribe, you must *take responsibility* for those decisions

All of these points are the same for physicians...

# Alberta: The Pathway to Prescribing



# **Evidence for Pharmacist Prescribing and Care**





# Pharmacist Prescribing in Hypertension: R<sub>x</sub>ACTION



- **Background:** Blood pressure control in the community is poor (30-90% uncontrolled)
- **Objective:** To evaluate the effect of pharmacist prescribing on systolic BP reduction in patients with poorly controlled hypertension
- **Methods:**
  - Design: Randomized controlled trial
  - Setting: community pharmacies in Alberta, Canada
  - Patients: 248 patients with BP >140/90 or >130/80 mmHg recruited by their pharmacist



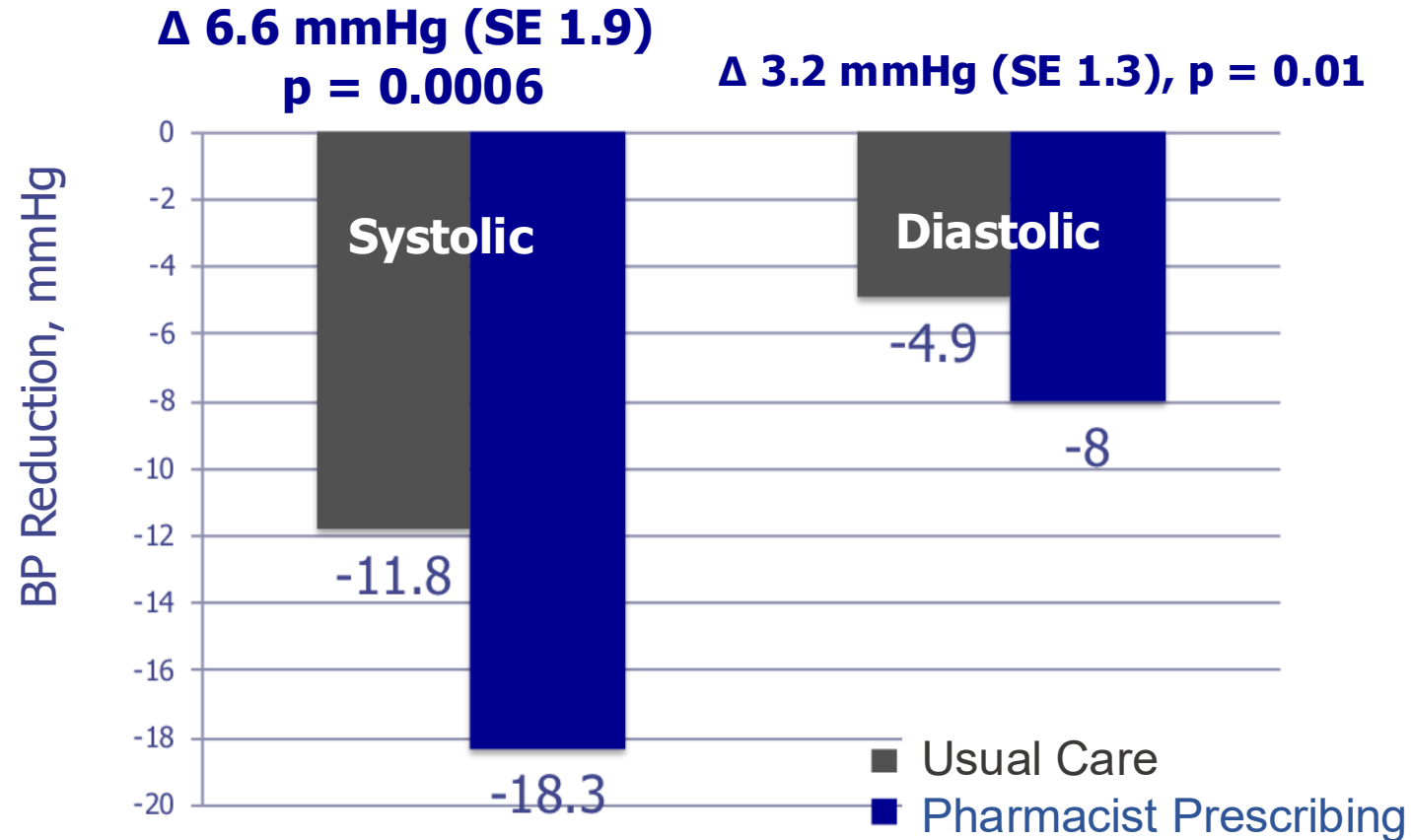
# R<sub>x</sub>ACTION Treatment Groups



- Per patient randomization to:
- **Intervention:** Pharmacist assessment (BP, CV risk), prescribing, laboratory testing, patient education, and follow-up (according to Hypertension Canada Guidelines)
- **Control (active):** usual pharmacist and physician care plus written educational materials, BP wallet card, referral to physician.
- Patient's physician notified, BP results shared in both groups



# RxACTION Results



- Adjusted odds of achieving target BP 2.32 (95% CI 1.17, 4.15) in favour of intervention

# Economic Evaluation of Pharmacist-Managed Hypertension



- Objective: To evaluate the cost-effectiveness of pharmacist prescribing in hypertension
- Methods:
  - Used R<sub>x</sub>ACTION results (-18.3 mmHg systolic blood pressure reduction)

Benefits (\$):

Reduced strokes  
Reduced myocardial infarctions  
Reduced kidney failure

-

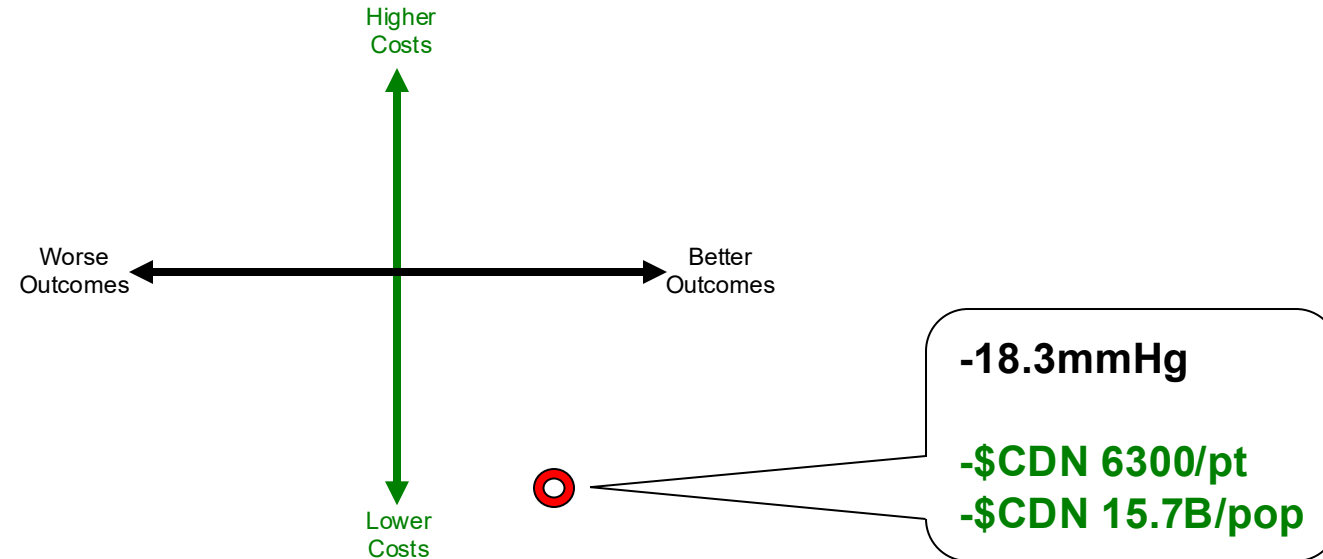
Costs (\$):

Pharmacist training  
Pharmacist payments  
Drug costs

= ?

- By individual patient
- At a population level

# Economic Evaluation of Pharmacist-Managed Hypertension



•Population level: If applied to ½ of Canadian population with uncontrolled hypertension:

- 540,000 fewer cardiovascular events
- 983,000 million life-years gained
- cost savings of \$CDN 15.7 billion (8.93 billion CHF)/30y

**Better BP control**  
**Net cost savings**



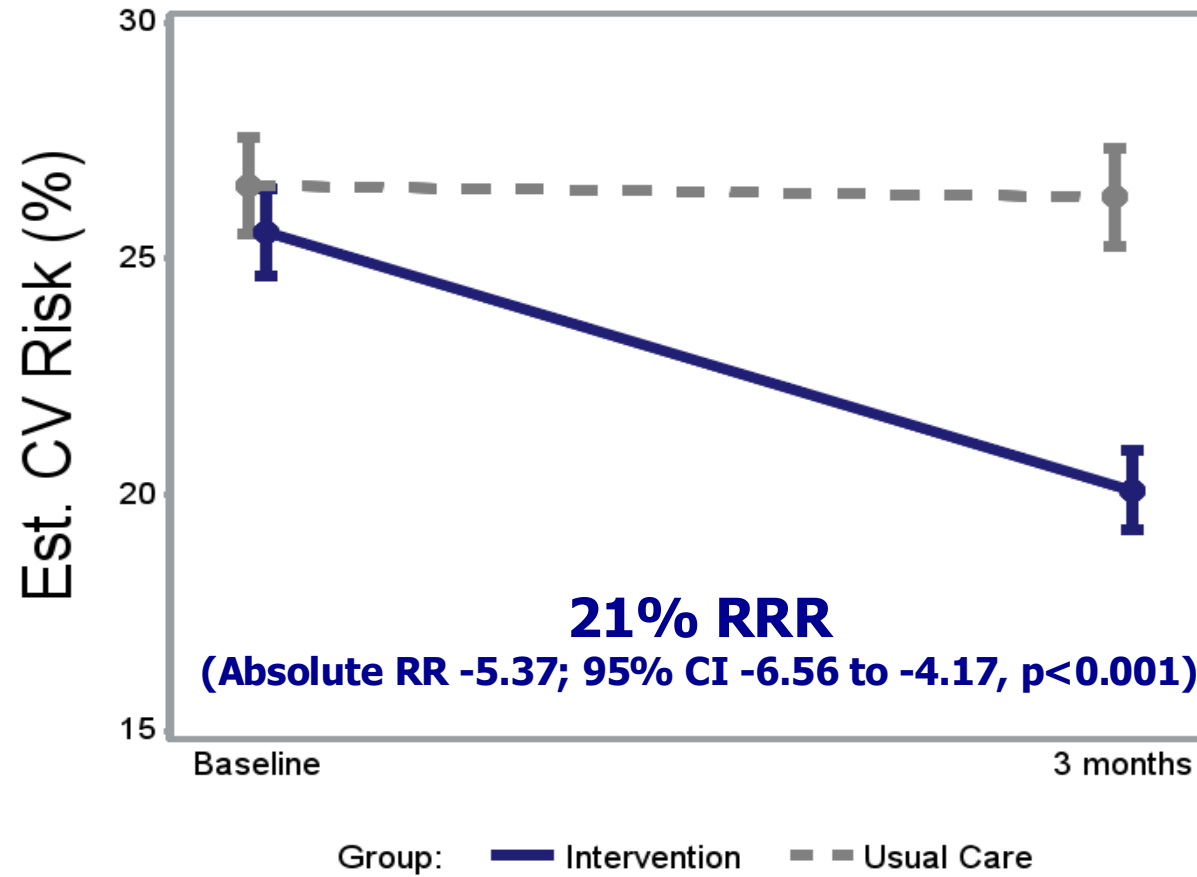
# Pharmacist Prescribing and Care in Cardiovascular Risk Reduction: Rx EACH



- **Background:** Many patients at high risk for cardiovascular disease are still not optimally managed
- **Objective:** To evaluate the effect of a community pharmacy-based prescribing intervention in patients at high cardiovascular risk on reduction in risk for major cardiovascular events
- **Methods:**
  - Patients: 723 at high risk for cardiovascular events (those with diabetes, chronic kidney disease, established vascular disease, high Framingham risk) and at least one uncontrolled risk factor
  - Randomized to:
    - Intervention: Cardiovascular risk assessment, patient education, prescribing, lab monitoring, monthly follow-up for 3 months (according to Canadian guidelines)
    - Control: Usual pharmacist and physician care

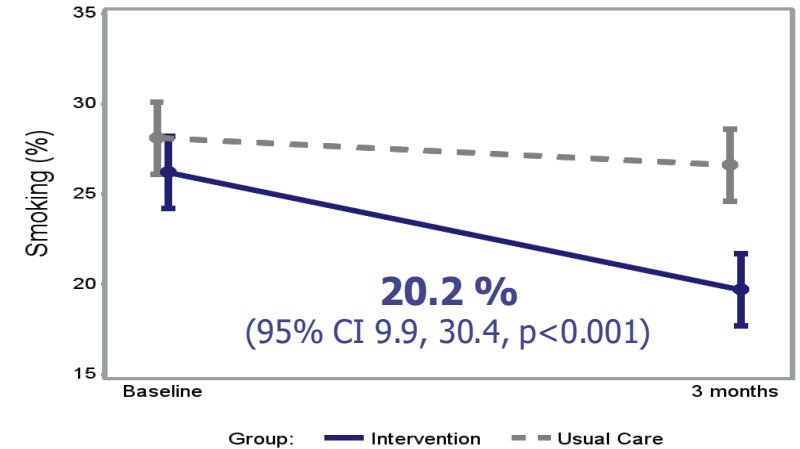
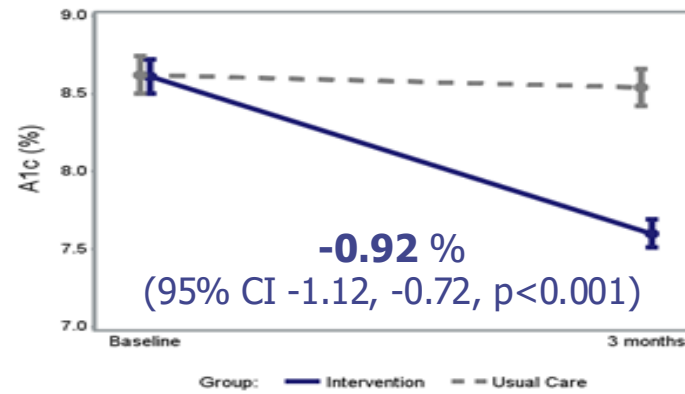
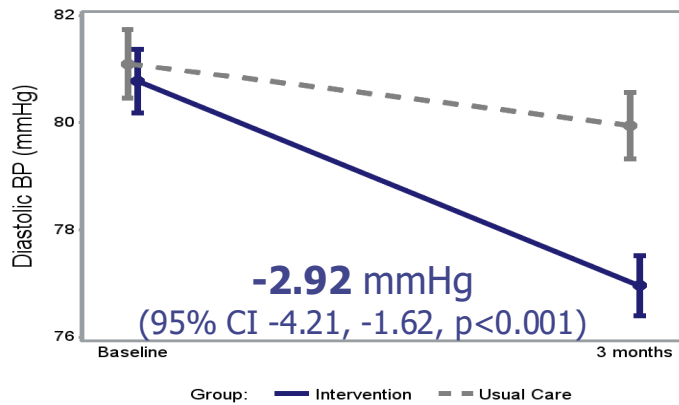
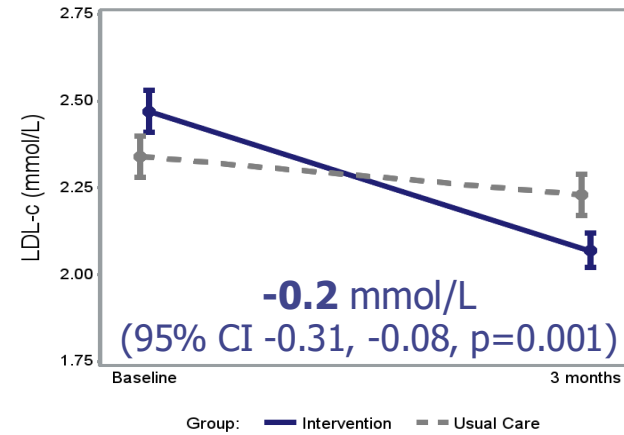
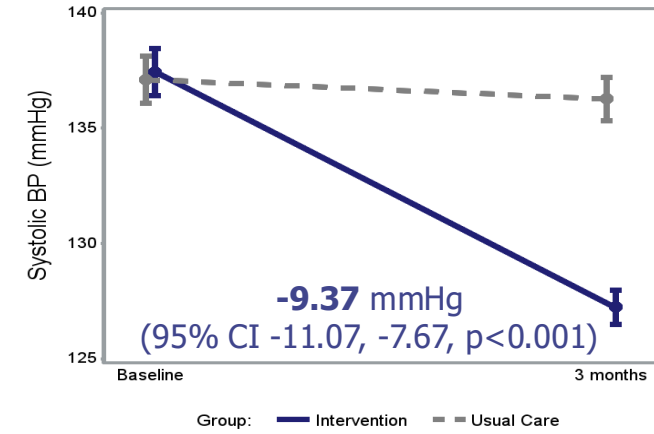


# R<sub>x</sub>EACH Primary Outcome





# R<sub>x</sub>EACH Secondary Outcomes





Pharmacists prescribing & care improves cardiovascular risk, but what do patients think?



14 patients answered questions on their perception of the intervention and care they received from pharmacists.

3 Themes Identified:

1. Patient-pharmacist relationships.



2. Health care system characteristics.



3. Patient reaction.



Patients thoughts:

1

Appreciation for:

- the strong relationship with their pharmacist
- pharmacists' compassion, caring, ability/willingness to explain concepts well, accessibility



2

Collaboration/ communication with their physician



3

High level of trust, satisfaction, feeling they were empowered



“[the pharmacist] asks us how we feel and actually talks to us...He cares...” (pt12)

“[the pharmacist] keeps [the doctor] up to date on what’s happening with us and he’s really happy with the way things are done for us... [the doctor is] very happy because he keeps him informed on everything (pt3)

“He’s definitely...been a life-saver... It’s been a Godsend” (pt3)

“gave me a reason to actually care about my health” (pt1)

Source: Hamarneh Y et al. CPJ/RPC, June 2018

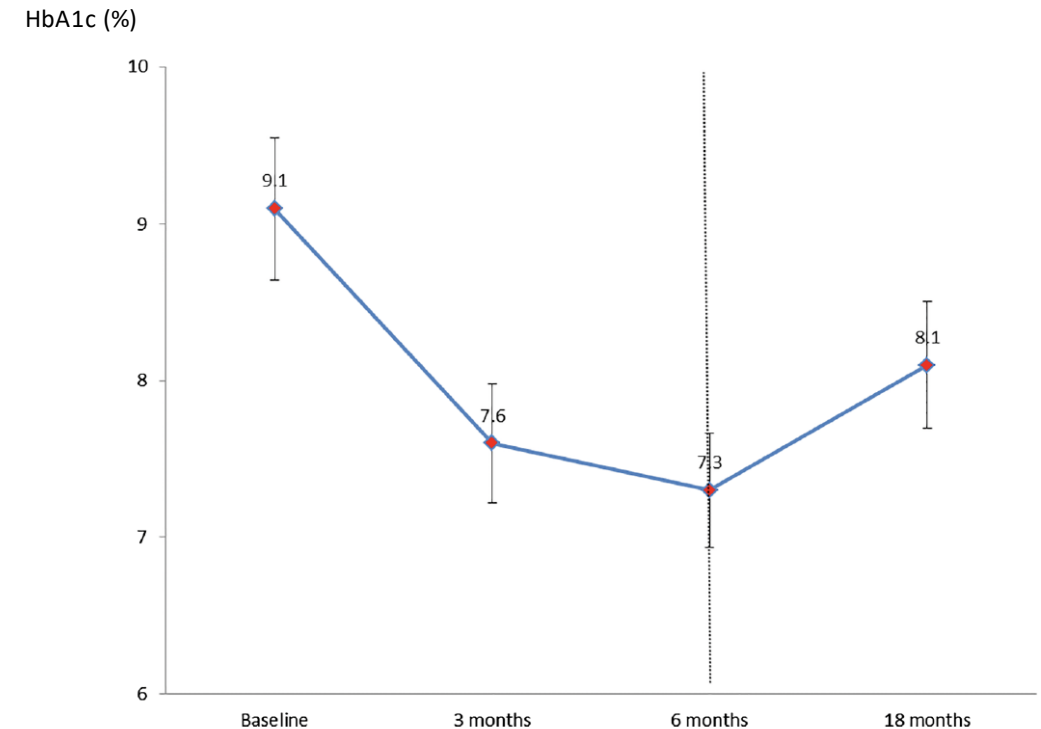
# Implementation



# What happens after the prescribing study ends: The R<sub>x</sub>ING 1 year follow-up



- R<sub>x</sub>ING was a pharmacist prescribing study in patients with poorly controlled type 2 diabetes
- 100 patients were enrolled; 93 completed the study.
  - HbA1c was reduced from 9.1% (SD 1.0) to 7.3% (SD 0.9), a change of 1.8% (95% CI 1.4 to 2.0,  $p < 0.001$ ) over 26 weeks
- We evaluated HbA1c 12 months after the final follow-up visit
  - 83 subjects completed a 1 year follow-up



Al Hamarneh YN, Charrois T, Lewanczuk R, Tsuyuki RT. BMJ Open 2013;3:e003154

Al Hamarneh YN, Sauriol L, Tsuyuki RT. BMJ Open 2015;5:e008152

# What we have learned



- RCT results are compelling, but insufficient to change practice
- Pharmacists need going support and tools
  - Not just for implementation, but continuation
- Many barriers exist, but we owe it to our patients/society to figure out ways to deliver this care

# Principles for Development of Implementation Tools (“Care Pathways”) for Pharmacists



- Interventions should be guideline/evidence-based
- Patient partners are essential to develop programs\*
- Shared decision-making with patients
- Need to measure outcomes:
  - Quality indicators derived from guidelines\*
- Tools should adopt case finding and patient engagement strategies (how do you find and engage patients?)
- Tools should facilitate documentation

# The Role of Patient Partners



- Patient partners have lived experience with the condition!
- Make sure study has broad appeal to potential participants
- Input on all patient-facing materials:
  - Shared decision-making
  - Study materials
  - CV Risk calculator
  - CV action plan for patients



# The Role of Patient Partners

- Recruitment via their networks such as social media
- Encouragement of pharmacists
  - Highlight the importance of what pharmacists are doing
  - Awards
- Patient partners are essential!

Dorothy Nelson

Gary Semeniuk



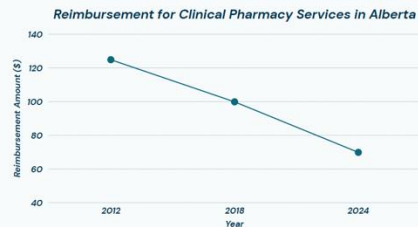
# Quality Indicators as Outcomes



## Measuring What Matters – Pharmacy-Sensitive Quality Indicators

[noun]: measurable elements of care that reflect the quality and outcomes of services directly influenced by pharmacists or pharmacy-teams within their scope of practice.

### SITUATION



- Pharmacists deliver essential patient care, but the value of their clinical services is not well demonstrated, leading to declining funding and service cuts (example on left).
- Demonstrating the value of pharmacist care through measurable outcomes is crucial to maintain and expand clinical services.

### BACKGROUND

- Traditional metrics (e.g., number of medication reviews performed) are not linked meaningful improvements in clinical outcomes.
- Quality indicators are widely used in healthcare to assess and improve performance – ‘nursing-sensitive quality indicators’ (based on the Donabedian model) were adopted two decades ago to link care to measurable patient outcomes.

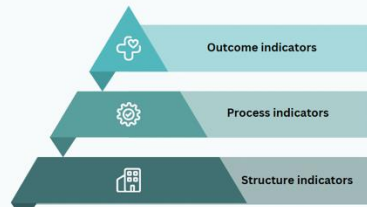


Figure. Donabedian Framework for Quality Indicators

### ASSESSMENT

Pharmacy-Sensitive Quality Indicators (PSQIs) are needed to provide measurable evidence of pharmacy’s contribution to quality care. We propose the following approach:

1. Derive PSQIs from clinical guidelines.
2. Supplement gaps using the literature and/or expert consensus.
3. Pilot test to confirm reliability, feasibility, and sensitivity of indicators.

## Examples of Opportunities for Diabetes-Related Pharmacy-Sensitive Quality Indicators

- ✓ Yes    
 ✓ Variable by province; where pharmacists do not have the required scope, a referral should be made    
 ✗ No – refer

Donabedian category	Examples of Diabetes-Related Quality Indicators relevant to Pharmacy Care	Proposed criteria to select and refine pharmacy-sensitive quality indicators				
		Relevant to pharmacists' scope	Evidence- or guideline-based	Measurable	Feasible and clear	Outcome focused
Structure	Access to patient laboratory data (e.g., HbA1c, renal function, lipid panel)	✓	✓	✓	✓	✓
	Pharmacy staffing levels that allow for dedicated clinical service time	✓	✓	✓	✓	✓
Process	The proportion of people with diabetes who receive personalised advice on physical activity	✓	✓	✓	✓	✓
	Percentage of patients who received a dilated eye examination or evaluation of retinal photography by an ophthalmologist	✗	✓	✓	✓	✓
	Percentage of patients with one or more HbA1c tests annually	✓	✓	✓	✓	✓
	Percentage of patients with at least one LDL-C test annually	✓	✓	✓	✓	✓
	Percentage of patients receiving at least one foot examination annually	✓	✓	✓	✓	✓
Outcome	Percentage of patients with cardiovascular or renal comorbidities who are prescribed pharmacotherapy for cardiorenal protection such as specific GLP1-RAs and/or SGLT2 inhibitors	✓	✓	✓	✓	✓
	Percentage of patients with most recent HbA1c level >7.0%	✓	✓	✓	✓	✓
	Percentage of patients with most recent LDL-C >2.0 mmol/L	✓	✓	✓	✓	✓

Tadrous M, Liu S, Tsuyuki RT. Can Pharm J 2025;158(6):xx-xx, DOI: 10.1177/17151635251384474

Liu S, Tadrous M, Tsuyuki RT. Can Pharm J 2026;159(1): in press

# An Example: PR<sub>x</sub>OACT



CJC Open 7 (2025) 821–831

## Study Design

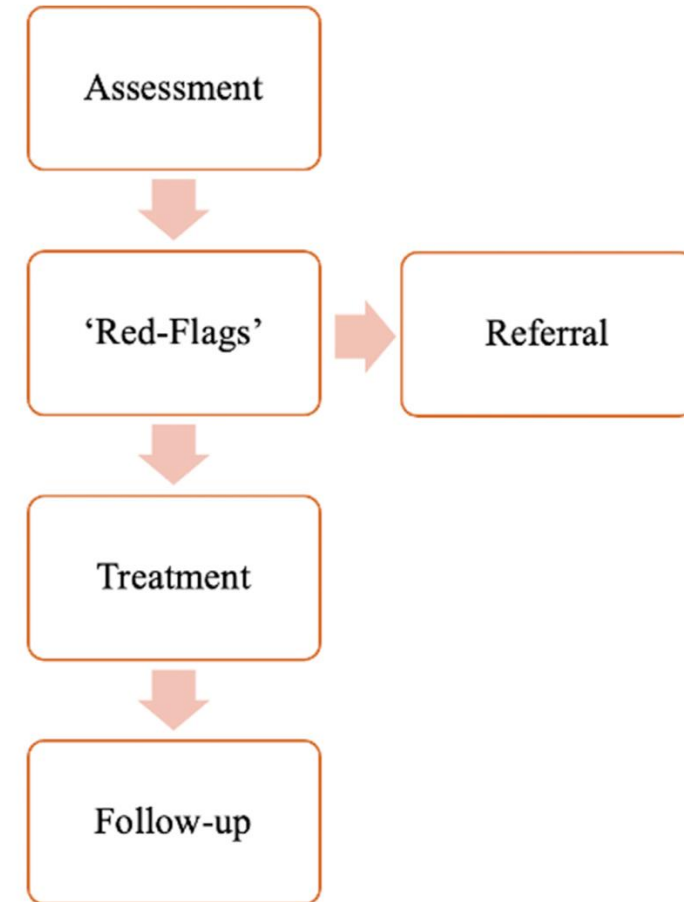
### Implementation of Pharmacist Case-Finding and Care Pathway Intervention for Vascular Prevention (PR<sub>x</sub>OACT): Protocol for a Randomized Controlled Trial

Shania Liu, BPharm (Hons), PhD,<sup>a</sup> Ross T. Tsuyuki, BSc(Pharm), PharmD, MSc,<sup>a,b,c</sup>  
Michelle M. Graham, MD,<sup>b</sup> Dorothy Nelson, patient partner,<sup>b</sup> Gary Semeniuk, patient partner,<sup>b</sup>  
and Yazid N. Al Hamarneh, BSc (Pharm), PhD<sup>a,c</sup>

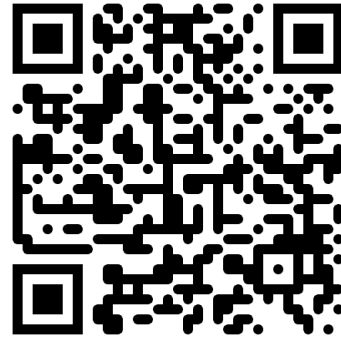
<sup>a</sup> *Epidemiology Coordinating and Research (EPICORE) Data Management Centre, Department of Medicine, Division of Cardiology, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada*

<sup>b</sup> *Department of Medicine, Division of Cardiology, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada*

<sup>c</sup> *Department of Pharmacology, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta, Canada*



# PR<sub>x</sub>OACT Care Pathway Demonstration

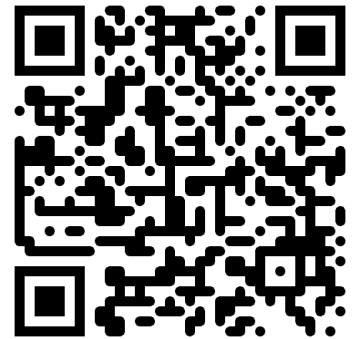


More about  
PR<sub>x</sub>OACT here

# Key Features of 'Care Pathways' Approach



- Structured approach: Case finding, Assessment (including "red flags"), Treatment and Follow-up
- Based upon national guidelines
- Patient partners as key allies
- Shared decision-making
- Quality Indicators as outcomes
- Documentation built-in



More about  
PR<sub>x</sub>OACT here

# A Perspective on Pharmacists' Independent Prescribing



- The evidence is strong
- This did not happen overnight – it will take time
- While the focus is often on prescribing, it is really more about patient assessment and decision-making
  
- What we need is implementation strategies
- “The question is not whether it will be difficult, but rather are we willing to embrace the transformation?”
  
- We must be **BOLD** and **COURAGEOUS**

# Conclusions



Mt. Robson, BC



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# Extra slides



# Cardiovascular Quality Indicators (from the Canadian Cardiovascular Society Guidelines)



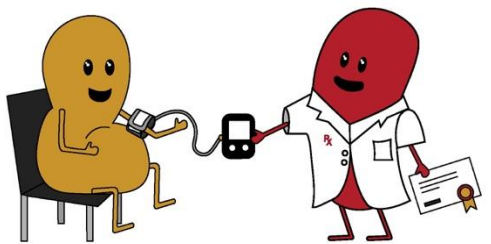
Cardiovascular disease <sup>15</sup>	<ol style="list-style-type: none"> <li>1. Percentage of adult patients who have weight and height or waist circumference recorded on the chart<sup>23-25</sup></li> <li>2. Percentage of adult patients who have alcohol consumption recorded on the chart<sup>23-25</sup></li> <li>3. Percentage of adult patients who have smoking status recorded on the chart<sup>23-25</sup></li> <li>4. Percentage of patients who are current smokers and have smoking cessation counselling or a referral for counselling recorded on the chart<sup>23-25</sup></li> <li>5. Percentage of healthy patients (no previous cardiovascular risk) 40 to 80 years of age (men) or 50 to 80 years of age (women) who have lipid testing at least every five years recorded on the chart<sup>23-25</sup></li> <li>6. Percentage of adult patients who have had a visit to their usual primary care provider's office in the previous three years whose blood pressure was recorded on the chart<sup>23-25</sup></li> <li>7. Percentage of patients older than 40 years of age (men) and older than 50 years of age (women) for whom a global risk assessment (e.g., Framingham model) has been recorded on the chart<sup>23-25</sup></li> <li>8. Percentage of patients with a systolic blood pressure of 140 mmHg to 159 mmHg or diastolic blood pressure of 90 mmHg to 99 mmHg who have a follow-up visit in a six-month period recorded on the chart<sup>23-25</sup></li> <li>9. Percentage of patients with an average systolic blood pressure of greater than 160 mmHg and/or a diastolic blood pressure greater than 100 mmHg, as determined on at least three separate visits, who have a diagnosis of hypertension recorded on the chart<sup>23-25</sup></li> <li>10. Percentage of adult patients whose blood pressure is 180/110 mmHg or greater, or 140/90 mmHg or greater and who have diabetes, chronic renal disease or target organ damage, who have a record on the chart of a second visit for blood pressure within two months of the first elevated blood pressure visit<sup>23-25</sup></li> <li>11. Percentage of adult patients whose blood pressure is 180/110 mmHg or greater, or 140/90 mmHg or greater and who have diabetes, chronic renal disease or target organ damage on a second visit, who were labelled as hypertensive on the chart<sup>23-25</sup></li> <li>12. Percentage of patients with an average systolic blood pressure of 160 mmHg or greater, or a diastolic blood pressure of 100 mmHg or greater with a recommendation for drug therapies recorded on the chart<sup>23-25</sup></li> <li>13. Percentage of patients with an average diastolic blood pressure of 90 mmHg or greater with a recommendation for drug therapies recorded on the chart if target organ damage is present or if they have independent cardiovascular risk factors (elevated systolic blood pressure, cigarette smoking, abnormal lipids, family history of premature cardiovascular disease, truncal obesity, sedentary lifestyle)<sup>23-25</sup></li> <li>14. Percentage of patient visits (for blood pressure follow-up) for those with hypertension whose blood pressure is above target (140/90 mmHg, or 130/80 mmHg for patients with diabetes or renal disease) with a plan of care for hypertension recorded on the chart that includes a change in dose or regimen of medications, and/or repeated education regarding lifestyle modification and/or planned reassessment<sup>23-25</sup></li> <li>15. Percentage of adult patients with hypertension and diabetes who have a measure of urinary protein excretion (e.g., 24 h urine, dipstick for microalbuminuria, etc) on the chart<sup>23-25</sup></li> <li>16. Percentage of patient visits for congestive heart failure during which weight was recorded in the chart<sup>23-25</sup></li> </ol>
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17. Percentage of adult patients with one or more of the following who have lipid testing recorded on the chart every two years: diabetes mellitus; hypertension and/or risk factors, such as smoking or abdominal obesity and/or strong family history of premature ischemic heart disease; or evidence of symptomatic or asymptomatic coronary artery or vascular disease<sup>23-25</sup>
18. Percentage of patients with hyperlipidemia for whom a therapeutic target, based on their global risk assessment and lipid profile, has been recorded on the chart<sup>23-25</sup>
19. Percentage of patients with hyperlipidemia who are at high risk for ischemic heart disease, for whom it has been recorded on the chart that pharmacological treatment was recommended immediately, concomitant with dietary and lifestyle changes<sup>23-25</sup>
20. Percentage of patients identified as hypertensive for longer than 12 months whose most recent blood pressure was at target:
  - a. Nondiabetic patients having a systolic blood pressure of less than 140 mmHg and a diastolic blood pressure of less than 90 mmHg.
  - b. Diabetic patients or patients with renal disease having a systolic blood pressure of less than 130 mmHg and a diastolic blood pressure of less than 80 mmHg.
  - c. Patients with proteinuria having a systolic blood pressure of less than 125 mmHg and a diastolic blood pressure of less than 75 mmHg.<sup>23-25</sup>
21. The percentage of patients with ischemic heart disease who are taking acetylsalicylic acid or have a contraindication to, or side effects from, acetylsalicylic acid.<sup>23-25</sup>
22. The percentage of patients with ischemic heart disease who have had a myocardial infarction and are taking a beta-blocker or have a contraindication to, or side effects from, a beta-blocker.<sup>23-25</sup>
23. The percentage of patients with ischemic heart disease who are on an angiotensin-converting enzyme inhibitor, or have a contraindication to, or side effects from, an angiotensin-converting enzyme inhibitor.<sup>23-25</sup>
24. Percentage of patients with left ventricular systolic dysfunction (ejection fraction of less than 40%), whether symptomatic or asymptomatic, who are taking an angiotensin-converting enzyme inhibitor or an angiotensin receptor II blocker, or have a contraindication to, or side effects from, both an angiotensin-converting enzyme inhibitor and an angiotensin receptor II blocker.<sup>23-25</sup>
25. Percentage of patients with left ventricular systolic dysfunction (ejection fraction of less than 40%) who are taking a beta-blocker or have a contraindication to, or side effects from, beta-blockers.<sup>23-25</sup>
26. Percentage of patients who receive self-management education<sup>23-25</sup>

# Improving Hypertension Detection and Control Through a Hypertension Certification Program Based Upon the Hypertension Canada Guidelines: A Cluster Randomized Trial (The R<sub>x</sub>PATH Trial)



- Uptake of guidelines into clinical practice is poor
- We designed The Hypertension Canada Professional Certification Program (HC-PCP), an online educational, program for primary care clinicians, based on the 2020 Hypertension Canada Guidelines
- HC-PCP consists of 4 modules, a real-time patient registry, and expert evaluation of blood pressure (BP) measurement technique and case management (<https://hypertension.ca/professional-certification-program>)



**Hypertension Canada Professional Certification Program**

# The R<sub>x</sub>PATH Trial



Objective: To determine the effect of the Hypertension Canada Professional Certification Program (HC-PCP) for pharmacists on systolic blood pressure reduction in patients with poorly controlled hypertension

## Methods:

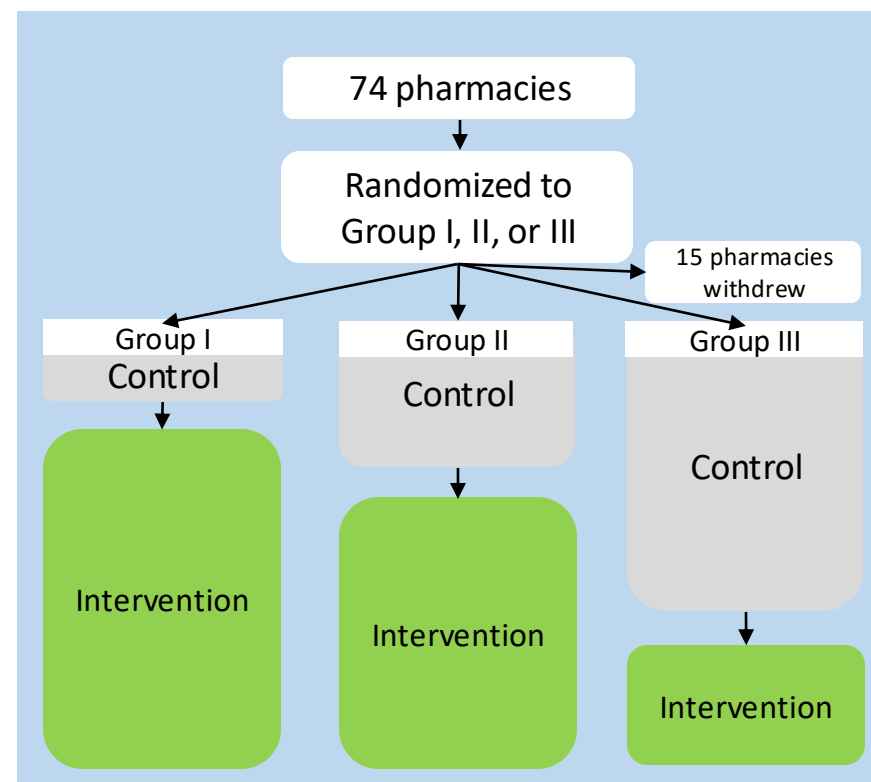
- Design: Stepped wedge cluster randomized trial (unit of randomization = pharmacy)
- Setting: Community pharmacies in Alberta, Canada
- Subjects: Patients with poorly controlled hypertension (BP > 140/90 or > 130/80 mmHg (diabetes))

# The R<sub>x</sub>PATH Trial: Methods, cont'd

Control Period: Focus on screening of patients and entry into a registry, HC Patient information given, no specific interventions

*HC-PCP training started towards the end of the control period*

Intervention: Application of the HC-PCP principles to patient care, including CV risk calculation, prescribing of antihypertensive medications, montly follow-up x 3 months





# The R<sub>x</sub>PATH Trial: Outcomes

Primary: Difference in change of systolic BP from baseline to 3 month follow-up between intervention and control patients

Secondary: Patient satisfaction, using the Consultation Satisfaction Questionnaire<sup>1,2</sup>

1. Poulton BC. Br J Gen Pract 1996;46(402):26-31
2. Kinnersley P, et al. BMJ 2000;320(7241):1043-8.

# The R<sub>x</sub>PATH Trial: Results

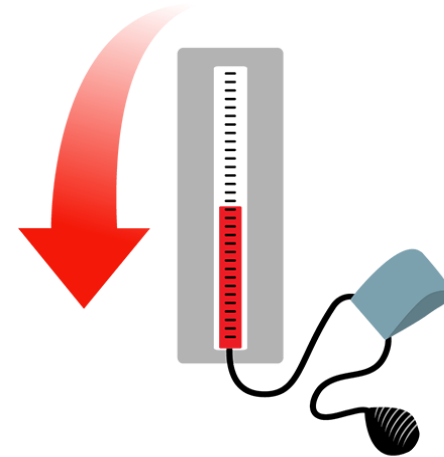
74 pharmacies (15 withdrawals), 104 pharmacists

890 patients enrolled

## Secondary Outcome (CSQ):

- General satisfaction: 13.3/15
- Professional care: 32.1/35
- Depth of relationship: 19.5/25
- Perceived time: 10.9/15
- **Total Score: 75.9/90**

## PRIMARY OUTCOME



# -4.76 mmHg

(95% CI -7.50, -2.02; p<0.0001)

systolic blood pressure reduction

# The R<sub>x</sub>PATH Trial: Conclusions

- The Hypertension Canada Professional Certification Program, taken by pharmacists, resulted in a significant reduction in systolic BP, compared to usual care over 3 months
  - Notably, most educational programs are not evaluated at the patient care level
- High level of patient satisfaction
- The HC-PCP is scalable to further improve detection and management of hypertension and could be implemented by all primary care clinicians, which would lead to better detection and control rates of BP