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Advancing Pharmacy Practice through Independent Prescribing: Evidence to Implementation - 10/26/2020

Provided by Center for Pharmacy Practice Innovation/Department of Pharmacotherapy and Outcomes Science

Speaker(s): Ross Tsuyuki, BSc(Pharm), PharmD, MSc

Topic: CPPI invites various health care professionals from around the country and globe to speak on issues relating to innovation in the health care space.

Purpose or Objectives: At the conclusion of this activity, the participant will be able to:

- 1 Review changes in health care delivery that likely impact pharmacy practice.
- 2 Describe current trends in contemporary pharmacy practice as they relate to interprofessional collaboration.
- 3 Discuss practice innovations designed to improve health outcomes.
- 4 Discuss role delineation for pharmacists on the interprofessional health care team.

Date/Time: 10/26/2020 12:00:00 PM

Location:

Accreditation:



In support of improving patient care, VCU Health Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCM), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation(s):

0.75 ANCC contact hours.



This activity provides 0.75 contact hours of continuing education credit. ACPE Universal Activity Number (UAN): Pharmacist: JA4008237-0000-20-132-L04-P Technician: JA4008237-0000-20-132-L04-T

NOTE FOR PHARMACISTS: Upon closing of the online evaluation, VCU Health Continuing Education will upload the pharmacy-related continuing education information to CPE Monitor within 60 days. Per ACPE rules, VCU Health Continuing Education does not have access nor the ability to upload credits requested after the evaluation closes. It is the responsibility of the pharmacist or pharmacy technician to provide the correct information [NABP ePID and DOB (in MMDD format)] in order to receive credit for participating in a continuing education activity.

Disclosure of Commercial Support:

We acknowledge that no commercial or in-kind support was provided for this activity.

Disclosure of Financial Relationships:

The following planners, moderators or speakers have the following financial relationship(s) with commercial interests to disclose:

Ross Tsuyuki, BSc(Pharm), PharmD, MSc: Consulting Fee-Shoppers Drug Mart | Consulting Fee-Emergent BioSolutions | Contracted Research-Sanofi-Aventis - 10/12/2020



Advancing Pharmacy Practice Through Independent Prescribing: Evidence to Implementation

Ross T. Tsuyuki, BSc(Pharm), PharmD, MSc, FCHSP, FACC, FCAHS
Professor and Chair, Department of Pharmacology
Professor of Medicine (Cardiology) and Director, EPICORE Centre
Faculty of Medicine and Dentistry

October 26, 2020.



Disclosures: Dr. Ross Tsuyuki

- Investigator-initiated grants from Merck, AstraZeneca, Sanofi, Pfizer
- Consulting: Emergent BioSolutions, Shoppers Drug Mart, HLS Therapeutics
- Editor-in-Chief, Canadian Pharmacists Journal
- President, SMHEART CONSULTING, INC.

Outline



- Why pharmacists and hypertension?
- Evidence for pharmacist care in hypertension
 - Systematic review
 - Independent prescribing
 - CV risk reduction
- But how do we implement it?

Why Pharmacists?

- Primary care pharmacists are highly accessible in the community, where hypertension arises and is (or isn't) treated
- Pharmacists see their patients about 8 times more frequently than they see their physician
- Hypertension:
 - ✓ Asymptomatic
 - ✓ Amenable to drug therapy management
 - ✓ Simple dx and monitoring
 - ✓ Strong evidence for pharmacist care, especially with a full scope of practice

Full Scope of Pharmacy Practice



Injections

- Immunizations
- Travel medicine
- Other injectable medications



Laboratory Tests

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



Prescribing

- Refill authorization
- Adaptation
- Independent prescribing
- Deprescribing



Disease Management

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

- Supported by evidence
- Preferred by patients

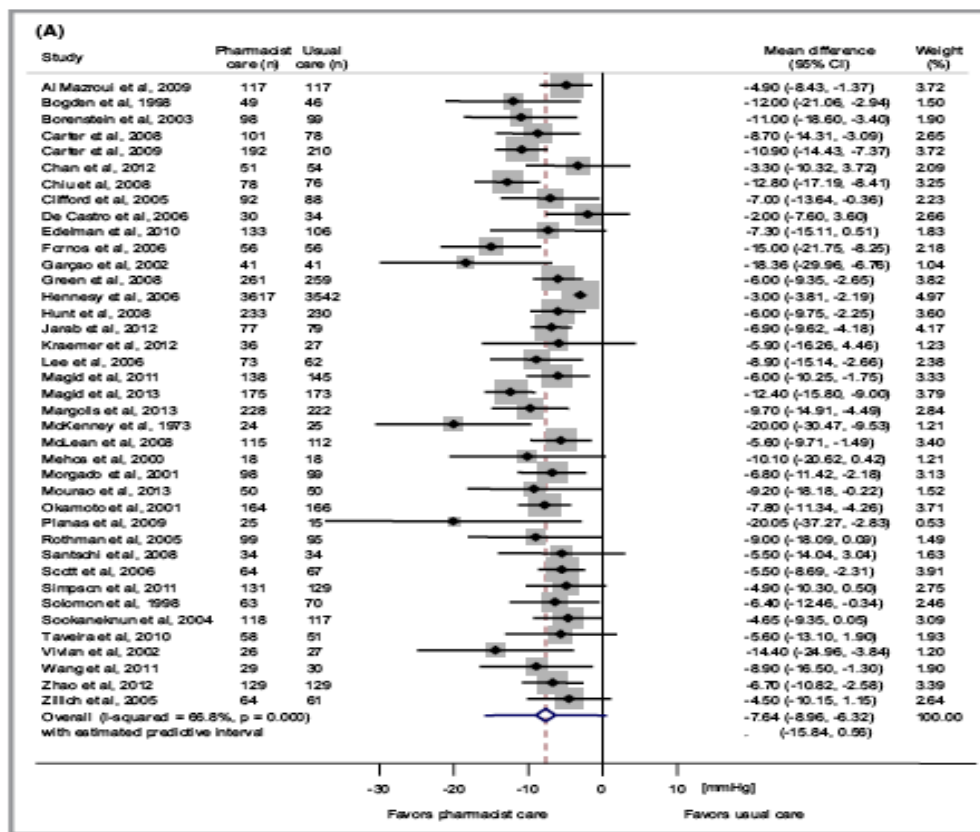


Scope of Practice in Alberta, Canada

- Injections: any immunizations, other injectable medications
- Prescribing: all can adapt, refill
 - Independent prescribing: application required (>50% are qualified, almost 100% in hospital)
- Laboratory testing: all can order and view (registration is required)
- Disease Management:
 - Medication management: \$100, annually, \$25/follow-up
 - COVID-19 assessment and testing

Evidence For Pharmacist Care in Hypertension

- 39 randomized trials
- 14,224 patients
- Effect on blood pressure:
 - 7.6** (95% CI -9.0 to -6.3) / -**3.9** (95% CI -5.0 to -2.8) mmHg
- Greater effects if pharmacist-led and monthly follow-up





Pharmacist Prescribing in Hypertension: R_xACTION



- **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_xACTION 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



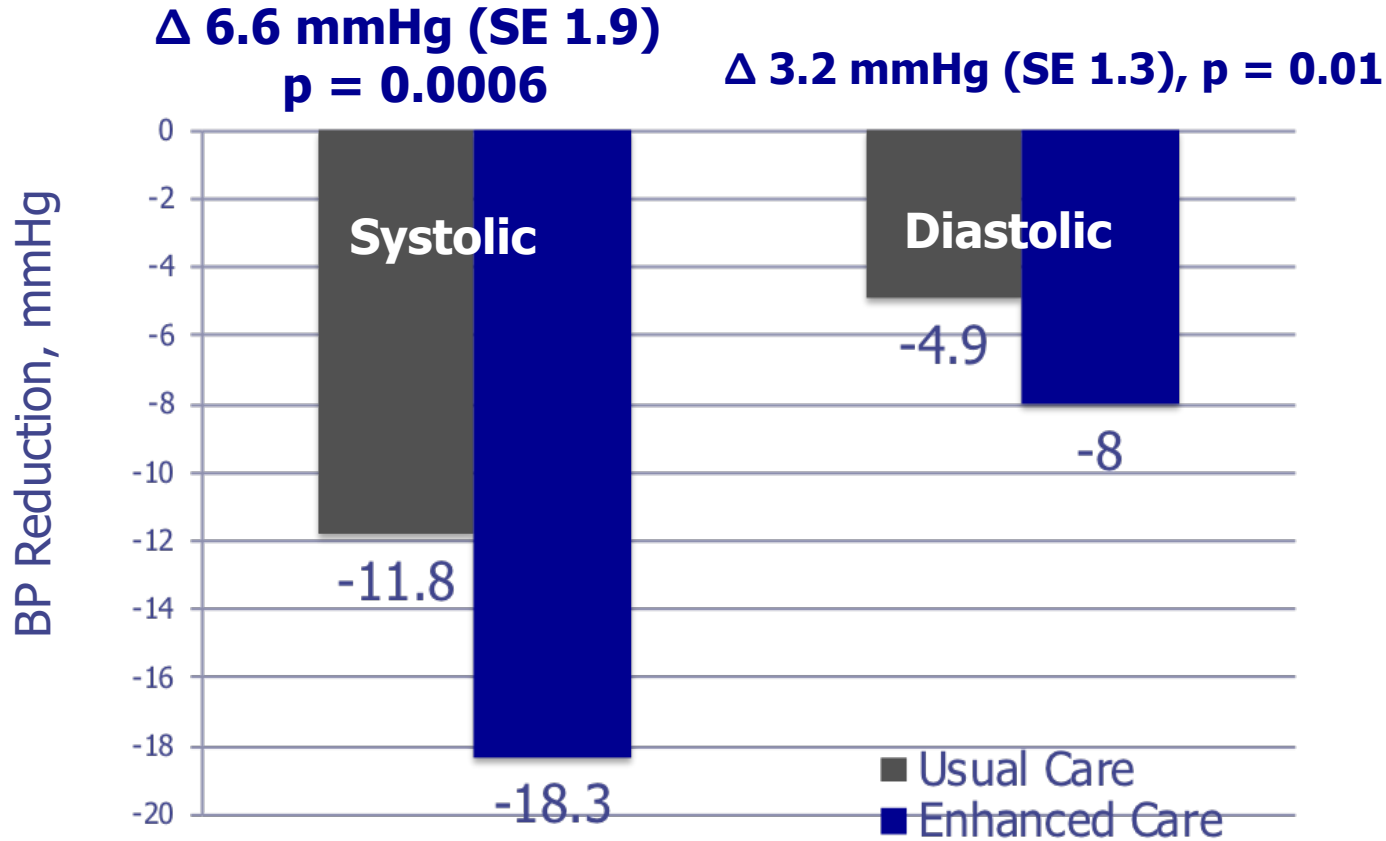
R_xACTION Demographics



Characteristic	Usual Care (n=67)	Enhanced Care (n=181)
Age, y (SD)	65 (11)	63 (13)
Male	48%	49%
BMI (SD)	32.0 (7.1)	31.8 (7.0)
DM	57	39
Baseline BP, mmHg (SD)	150.8 (11) / 82.1 (9.9)	149.3 (14.4) / 83.9 (12.1)
On HTN tx	84%	76%
#HTN drugs (SD)	1.7 (1.2)	1.7 (1.2)



R_xACTION Results



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

What we learned from R_xACTION

- Pharmacists need lots of support
 - Recruitment/case-finding¹
 - “Hand-holding”
 - Clinical support (we had a “hotline” for clinical questions)
- What didn’t work:
 - Payment for performance²

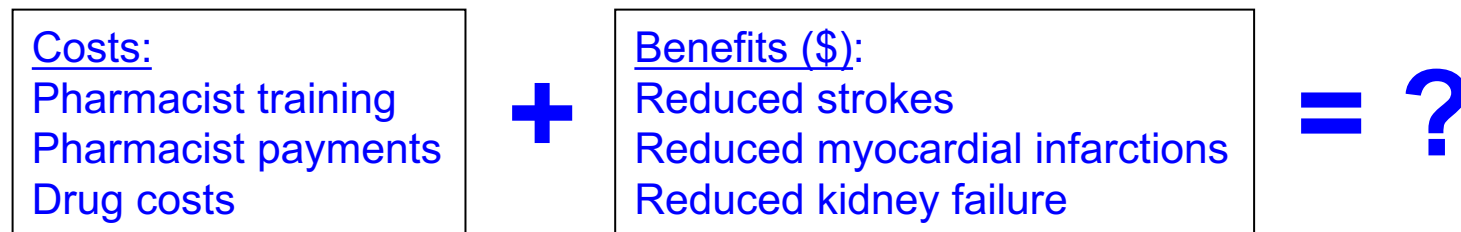
1. Kassamali A, et al. Can Pharm J 2011;144(4):170-173.

2. Houle SKD, et al. Can Pharm J 2016;149(6):345-351.

Economic Evaluation of Pharmacist-Managed Hypertension



- Objective: To evaluate the cost-effectiveness of pharmacist prescribing in hypertension
- Methods:
 - Used R_xACTION results (-18.3 mmHg systolic blood pressure reduction)

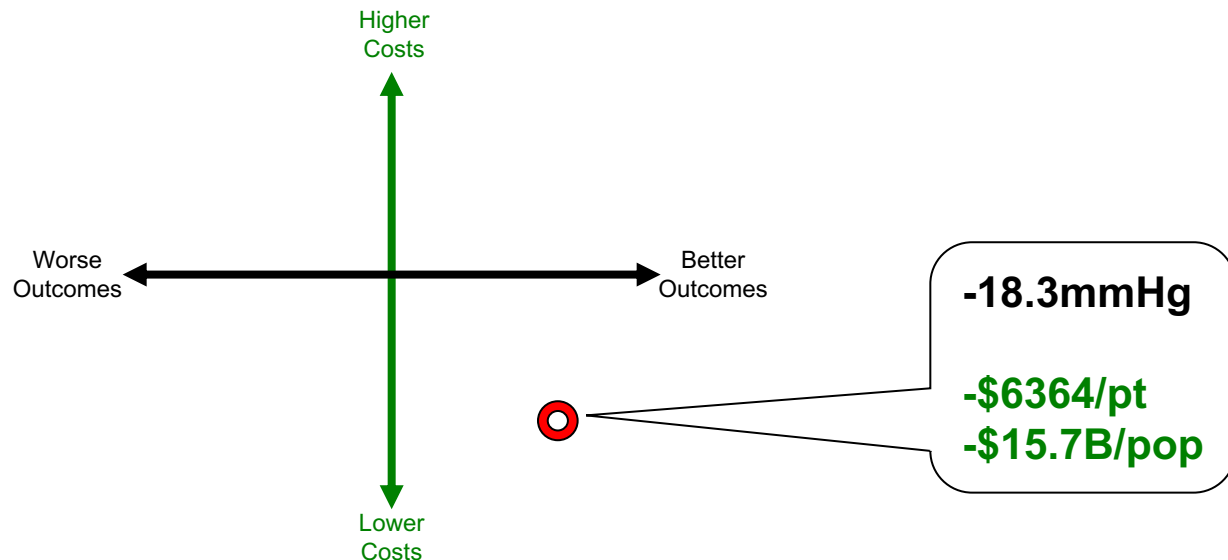


- By individual patient
- At a population level

Economic Evaluation of Pharmacist-Managed Hypertension



Results:



- Individual patient: \$6,364 cost savings over 30 years
- Population level: If applied to ½ of Canadian population with uncontrolled hypertension:
 - 540,000 fewer cardiovascular events
 - 983,000 life-years gained
 - cost savings of \$CDN**15.7B**/30y (\$US 11.7B)



Pharmacist Prescribing and Care in Cardiovascular Risk Reduction: R_xEACH

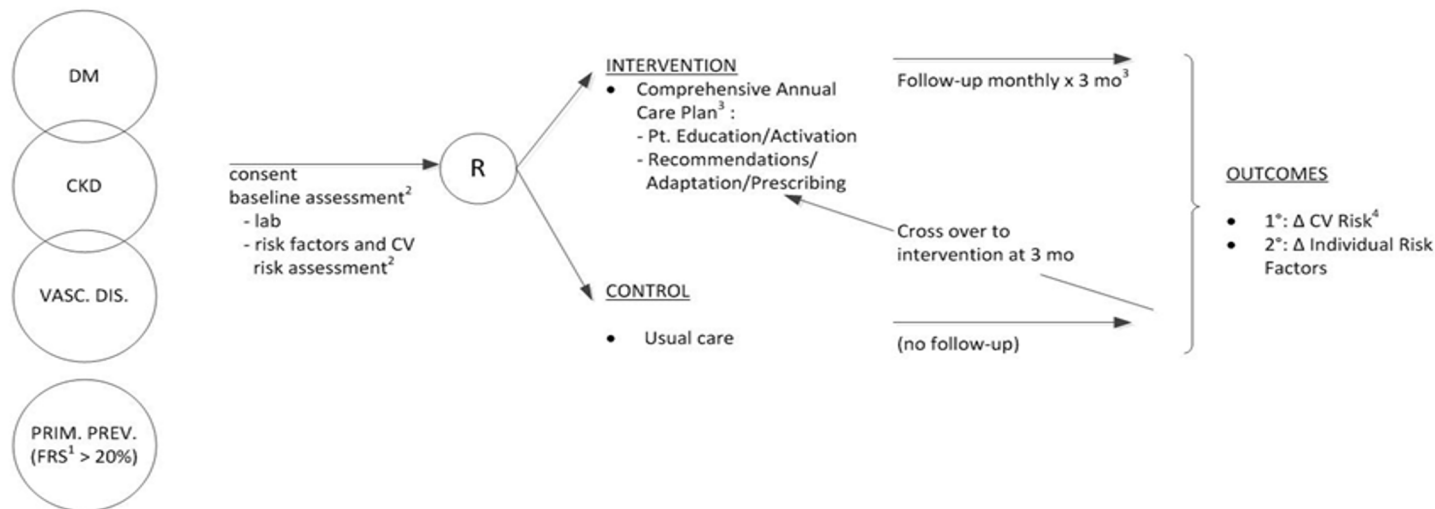
- **Background:** Many patients at high risk for cardiovascular disease are still not optimally managed
- **Objective:** To evaluate the effect of a community pharmacy-based prescribing intervention in patients at high cardiovascular risk on reduction in risk for major cardiovascular events
- **Methods:**
 - 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_xEACH Study Overview

Setting: Community Pharmacies
Design: Per patient randomized controlled trial

PATIENTS (All high CV risk)



1. PRIM. PREV. = Primary Prevention; FRS = Framingham Risk Score
2. Risk of CV events calculated using most appropriate risk engine (i.e., UKPDS, International, or Framingham)
3. Billing to Alberta Health, includes New CKD Fee Code.
4. Difference in change in CV risk (from risk engine used at baseline) between intervention and control groups.



R_xEACH Intervention

- A standard Medication Therapy Management consultation:
 - *Patient assessment:* blood pressure, waist circumference, weight and height measurements
 - *Lab assessment:* A1C, lipid profile and kidney function and status
 - *Individualized CV risk assessment:* risk calculation and education about this risk
 - *Treatment recommendations, prescription adaptation, and prescribing* as appropriate to meet treatment targets
 - *Regular follow-up:* every 4 weeks for 3 months

Risk Factors

Framingham Calculator

BP Systolic (mmHg): **153**

BP treated: **NO**

Total Cholesterol (mmol/L): **5.3**

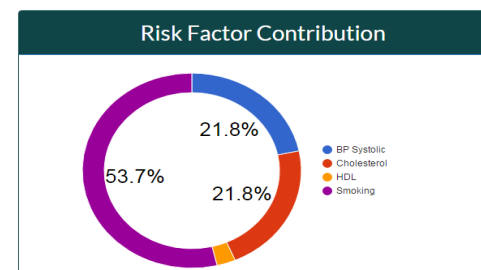
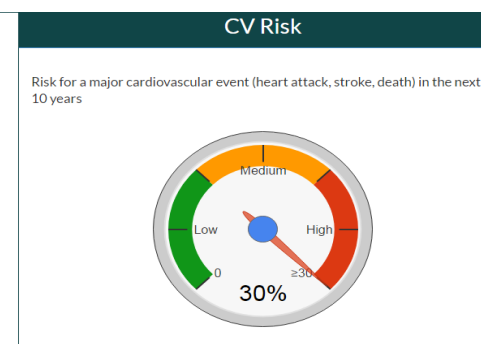
HDL (mmol/L): **1**

CVD history: **NO**

Smoking: **YES**

FINISH

PRINT





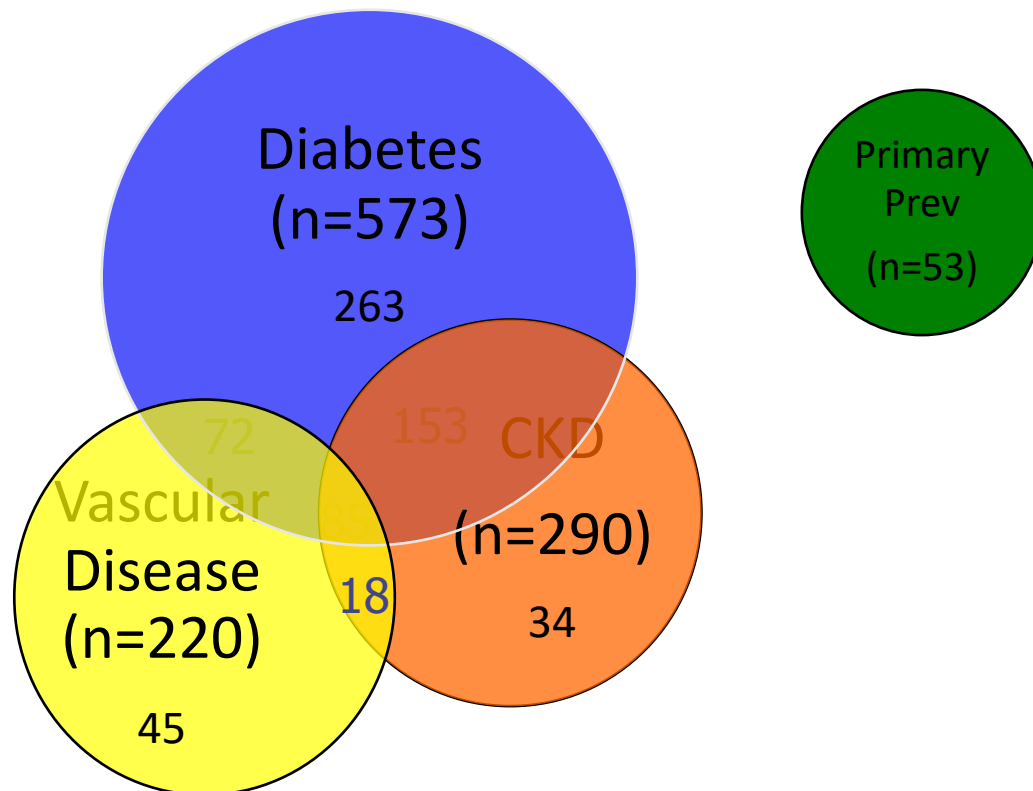
R_xEACH Control Group

- Usual pharmacist and physician care with no specific interventions for 3 months
- At the end of the 3 months of the control period, all patients crossed over to receive “intervention” for 3 months



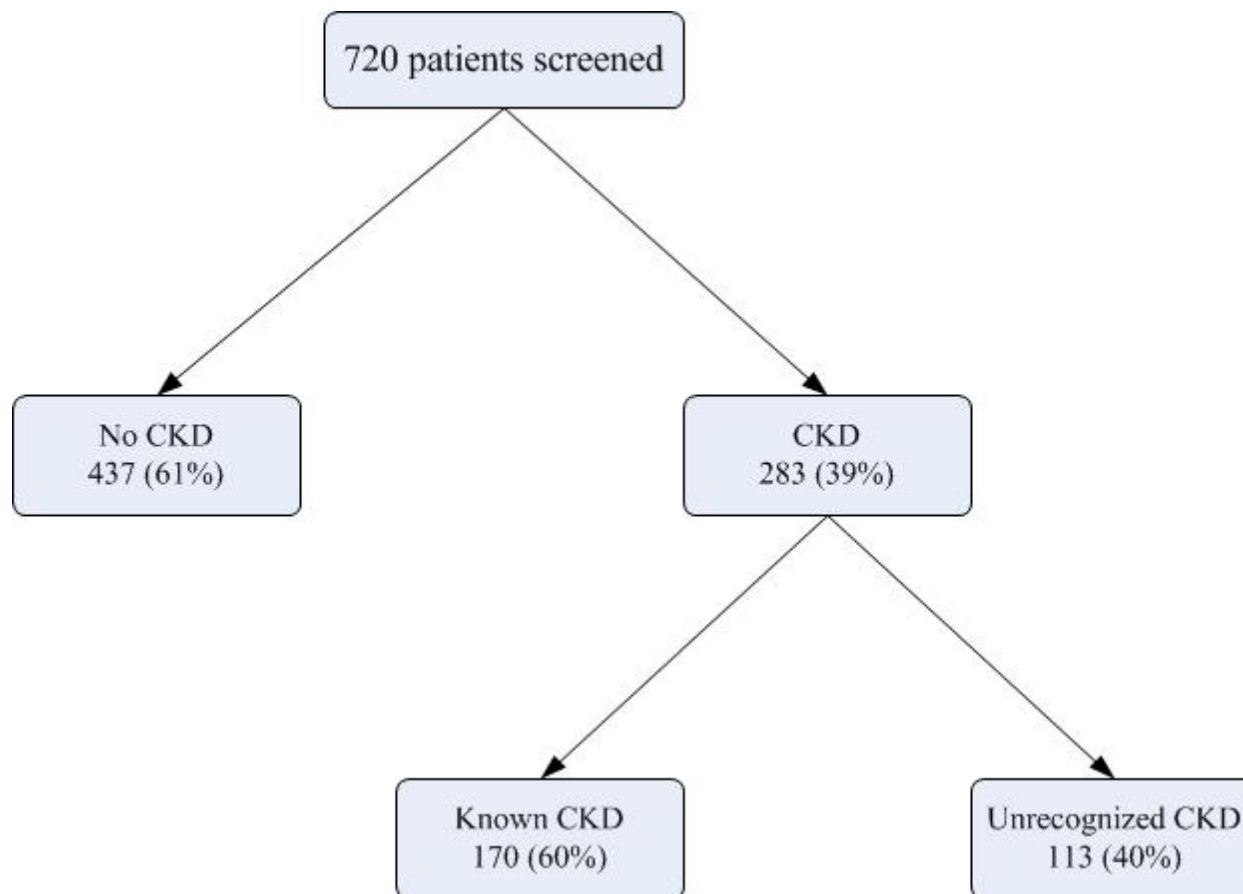
R_xEACH Demographics

- Age: 62y (SD12)
- Male: 58%
- Study Eligibility:
 - 79% uncontrolled HbA1c
 - 72% uncontrolled BP
 - 58% uncontrolled LDL
 - 27% current smokers



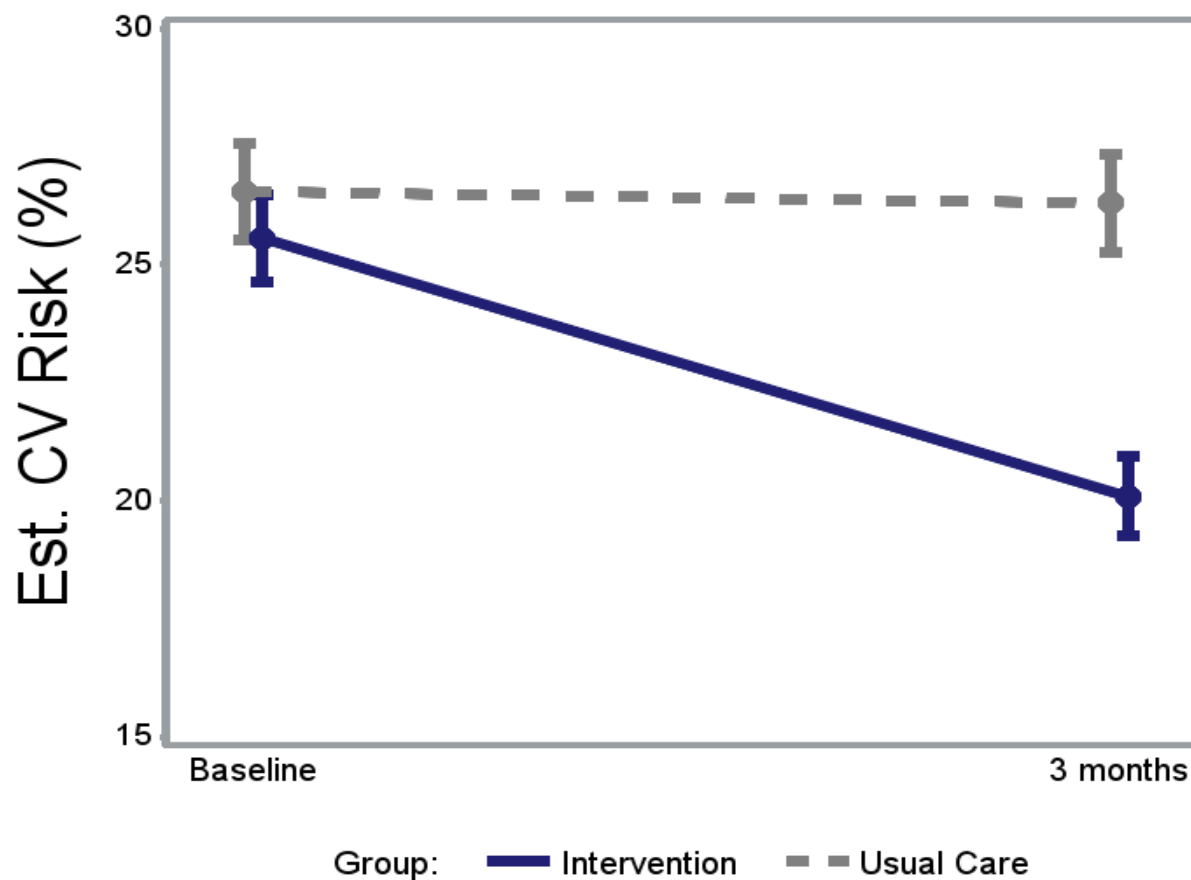


CKD Screening By Pharmacists



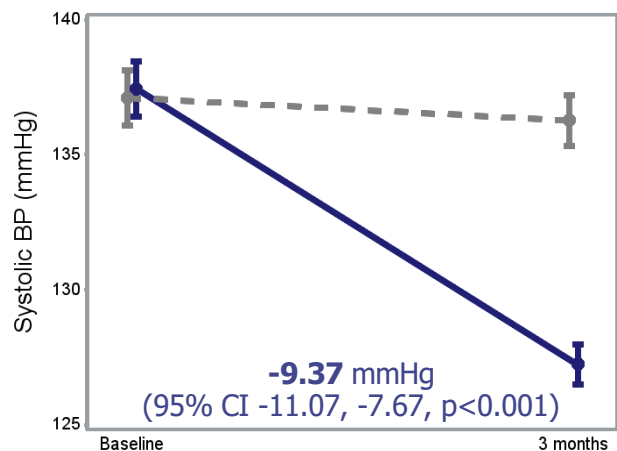


R_xEACH Primary Outcome

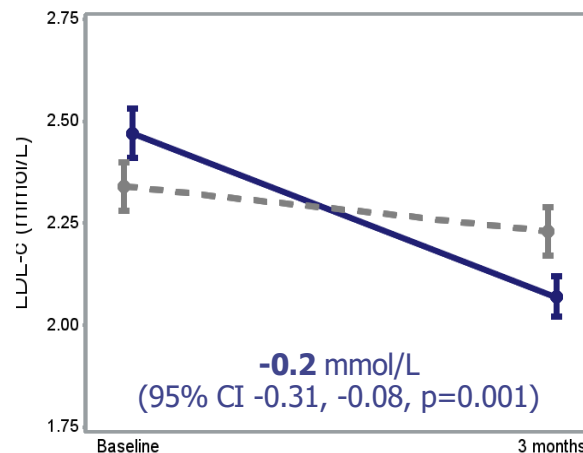




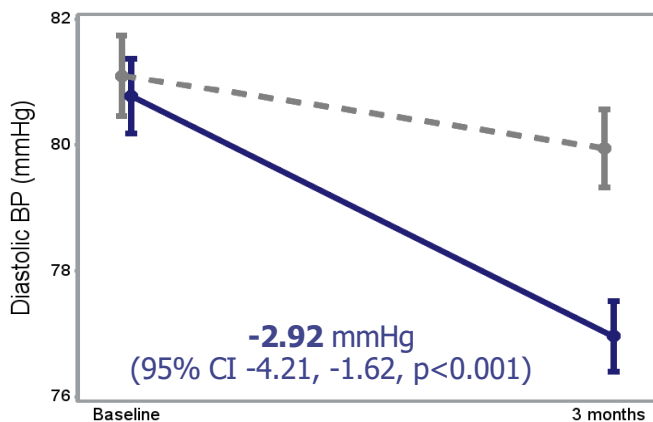
R_xEACH Secondary Outcomes



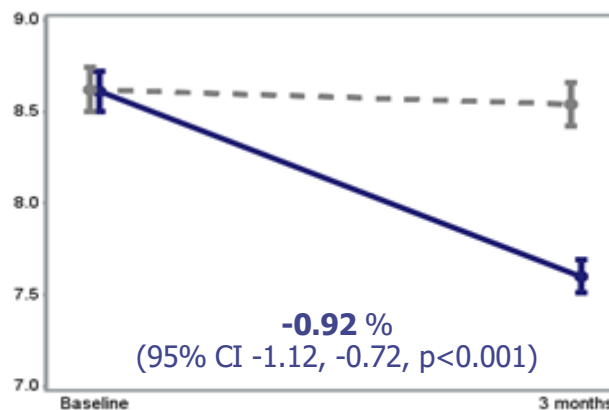
Group: — Intervention — Usual Care



Group: — Intervention — Usual Care



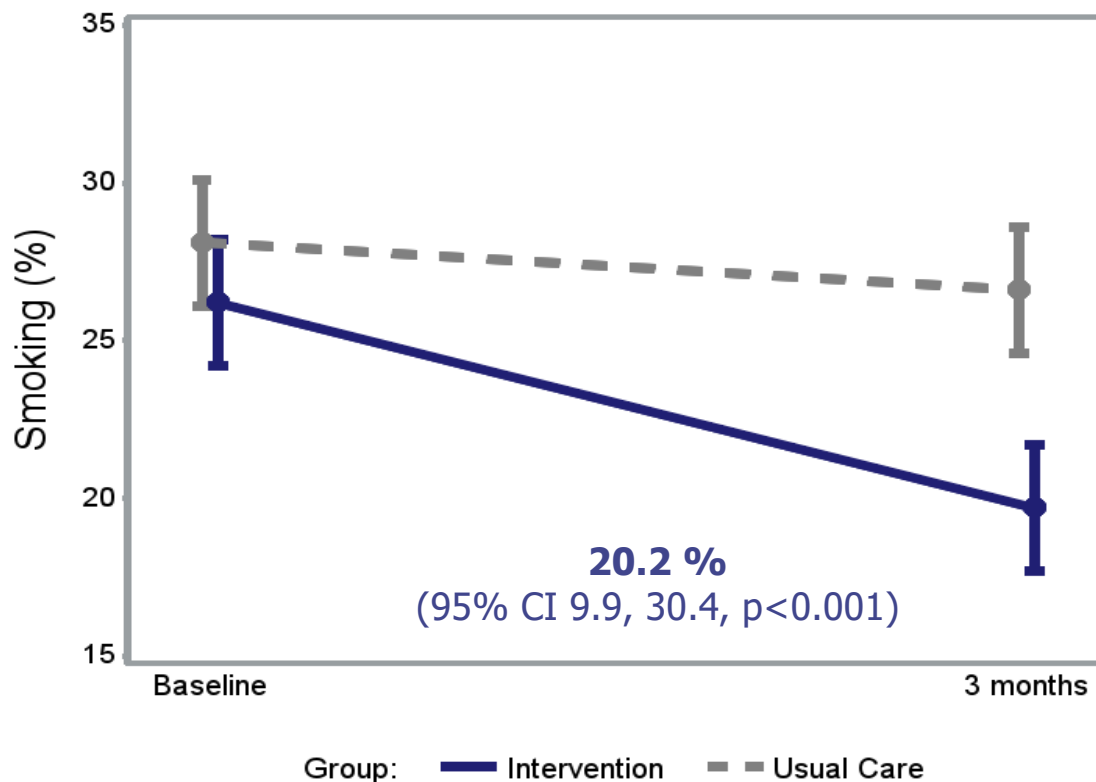
Group: — Intervention — Usual Care



Group: — Intervention — Usual Care



Rx EACH Tobacco Cessation





R_xEACH Patient Perceptions



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.



Patient Thoughts:

1. Extremely supportive and appreciative of pharmacists' full scope of practice.



2. Reassured that pharmacists and Physicians are communicating.



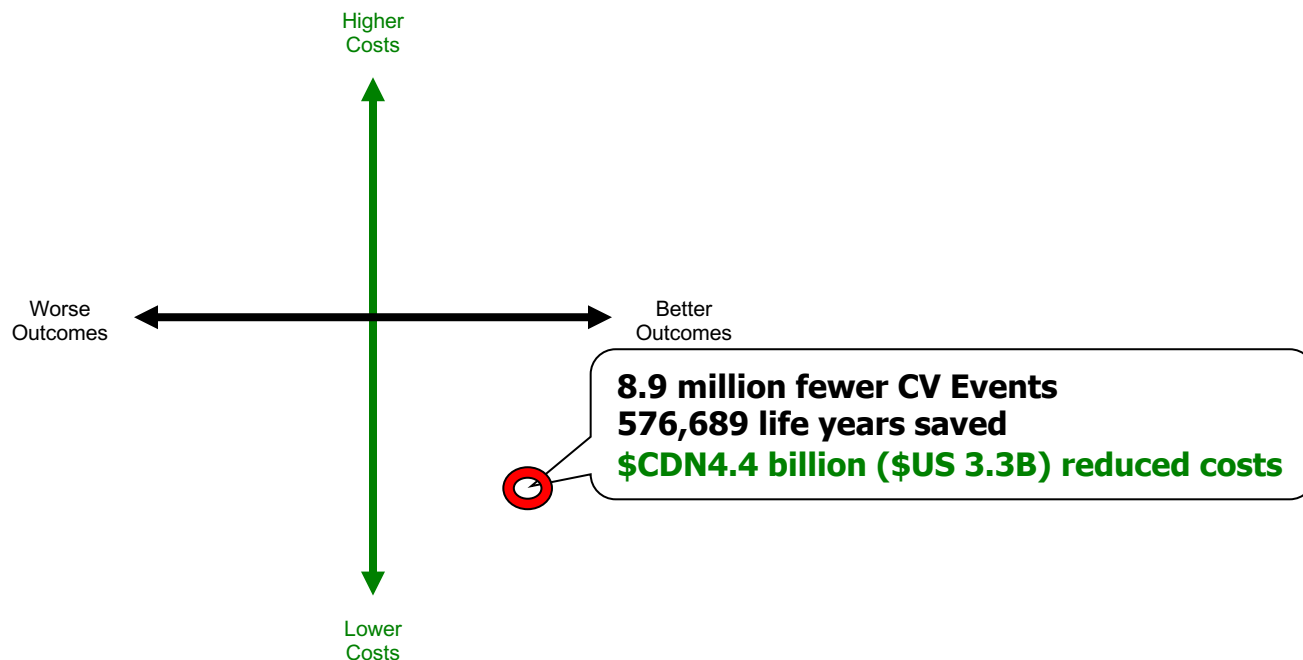
3. Accessibility, good relationships and compassion are major contributors to satisfaction.



Pharmacists' full scope of practice is patient centered and could be of great public health benefit



R_xEACH Cost Effectiveness



- Based upon 15% of high risk patients cared for by their pharmacist
- 30 y time horizon

What we learned from R_xEACH

- Online cardiovascular risk tool (EPI-R_xISK) was very population and empowering for the pharmacist and patient
- Patient satisfaction with their care is an important outcome that we should always measure

Implementation: Next Steps

- Other barriers include pharmacists' mindset – culture of pharmacy, corporations, confidence, need for patient care processes
- What we're doing:
 - Working with Hypertension Canada
 - Hypertension certification program for pharmacists
 - Redesigning MTM for chronic diseases



Hypertension
CANADA



WHO WE ARE

Hypertension Canada is Canada's only national non-profit organization dedicated solely to the prevention and control of hypertension and its complications. Powered by a professional volunteer network of the leading multidisciplinary experts in hypertension, Hypertension Canada publishes Canada's clinical practice guidelines for the diagnosis, treatment and control of hypertension and pursues its mission through the advancement of research, professional and public education, and advocacy for healthy environments.

MISSION

Advancing health through the prevention and control of high blood pressure and its complications.

VISION

Canadians will have the healthiest and best managed blood pressure in the world.

VALUES

Evidence-based decision making
Innovation
Multi-disciplinary, multi-sectoral collaboration
Transparency
Volunteer leadership
Respect and teamwork



Hypertension Canada Professional Certification Program (HC-PCP)



- Incorporates the Hypertension Canada guidelines and provides the skills and confidence to identify and manage patients with hypertension
 - Target audience = pharmacists, then later, physicians
- Facilitated by Hypertension Experts
- Level 1 – Hypertension Fundamentals (~ 15 hours over 5 weeks)
- Level 2 – Mastery and Application (~20 hours over 5 weeks)
- Can be taken separately but designed to be taken together as Level 2 builds and applies Level 1 material

<https://hypertension.ca/professional-certification-program/>

- Module 1 – Epidemiology & Pathophysiology of Hypertension
 - Quizzes
- Module 2 – Hypertension Screening
 - Quizzes and BP Measuring video
- Module 3 - Hypertension Prevention & Non-Pharmacological Management of Hypertension
 - Quizzes
- Module 4 – Pharmacological Management of Hypertension Management
 - Quizzes and patient cases

UNIVERSITY OF ALBERTA eClass External HELP EMAIL Kaitlyn Watson

Hypertension Canada Professional Certification Program: Level 2 'Mastery & Application'

Dashboard / My courses / Hypertension Canada Professional Certification Program: Level 2 / Module 3: Prevention and Non-Pharmacologic Management of Hypertension

Turn editing on

[General](#)
[Module 1: What is Hypertension?](#)
[Module 2: Hypertension Screening](#)
[Module 3: Prevention and Non-Pharmacologic Management of Hypertension](#)
[Module 4: Pharmacologic Management of Hypertension Management](#)
[Resources and Tools](#)
[Registry Submissions](#)

3 MODULE 3

Prevention and Non-Pharmacologic Management of Hypertension

Welcome to Module 3: Hypertension Prevention

In this module you will complete the following:

1. Pre-test
2. Learning Segments for the following competencies
 - Part 1: Hypertension Prevention & Management: Lifestyle Strategies
 - Part 2: Hypertension Prevention & Management: Non-adherence, Coaching, Motivation and Intervention

Calendar

March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- Hide global events
- Hide category events
- Hide course events
- Hide group events
- Hide user events

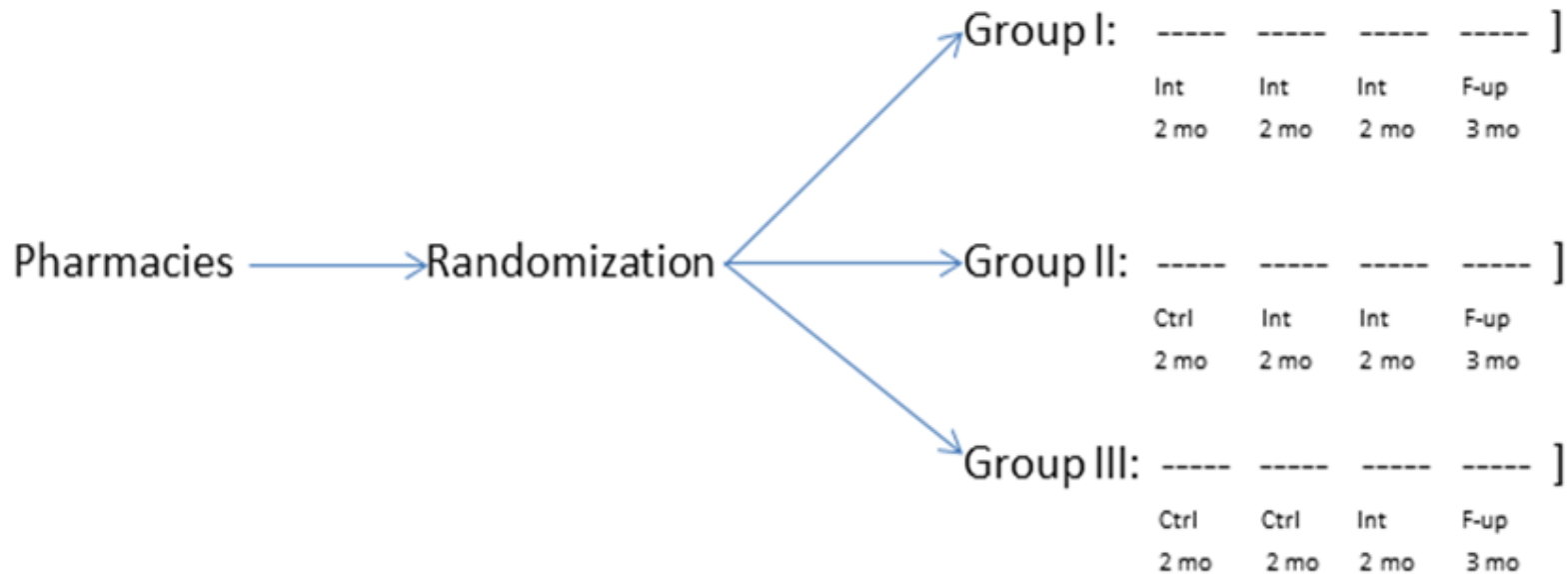
Upcoming events

There are no upcoming events

[Go to calendar](#)



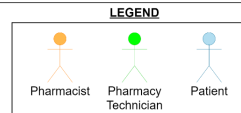
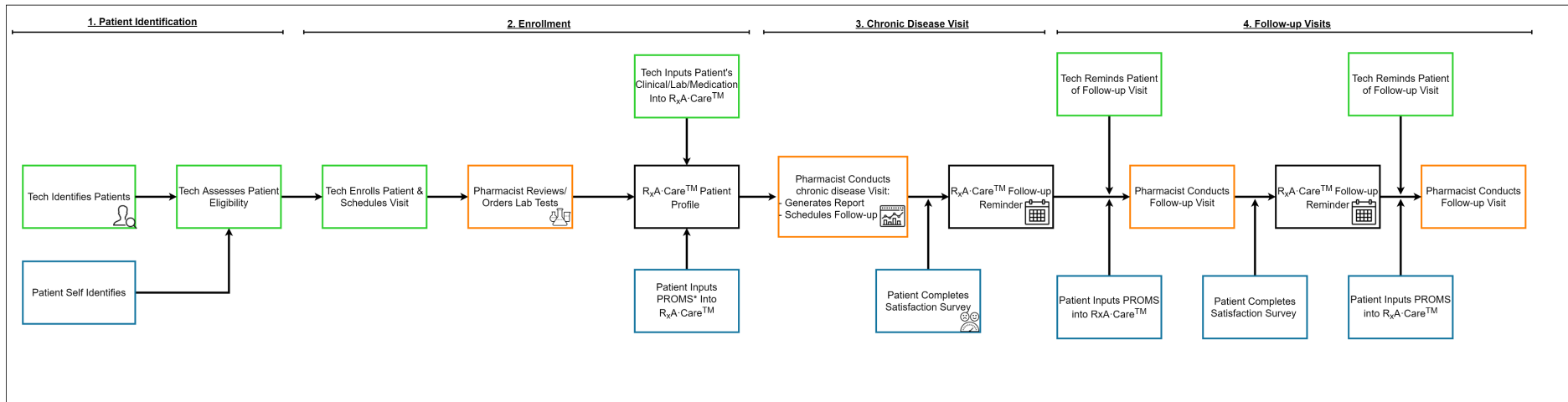
Impact of the HC-PCP on BP Outcomes



- Intervention = HC-PCP/pharmacy
- Outcome: change in systolic BP

Redesigning MTM

Rx Care



Summary



- *A full scope* of pharmacist practice: prescribing and care for hypertension and cardiovascular risk reduction adds significant value:
 - Supported by strong evidence
 - Lower healthcare costs
 - Preferred by patients
- This could be the most important thing that pharmacists do