

The RxPATH randomized trial of the Hypertension Canada Professional Certification Program: A novel implementation strategy for hypertension guidelines

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Background/Rationale:

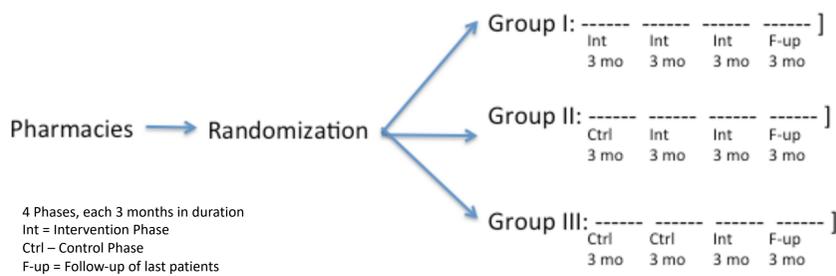
- Uptake of guidelines into clinical practice is poor
- We designed an online educational program for primary care clinicians, based upon the 2020 Hypertension Canada Guidelines
- The Hypertension Canada Professional Certification Program (HC-PCP) consists of 4 online modules, a real-time patient registry, and expert evaluation of blood pressure (BP) measurement technique and case management (see QR code below)
- We were interested in evaluating the impact of the HC-PCP on patient level outcomes

Objective:

To determine the effect of the HC-PCP, taken by pharmacists, on systolic blood pressure in patients with poorly controlled hypertension

Methods:

- Design: stepped wedge cluster randomized trial (unit of randomization was the pharmacy)



- Setting: Community pharmacies in Alberta, Canada
- Population:
 - Patients with poorly controlled hypertension: BP >140/90 mmHg or >130/80 mmHg (diabetes)
- Intervention: Pharmacists completed the HC-PCP program, then provided care to their patients with poorly controlled hypertension according to what they learned in the course
- Control: Pharmacists were given a copy of the Hypertension Canada Guidelines and they provided their usual care to their patients prior to undertaking the HC-PCP
- Outcomes:
 - Primary: Difference in change in systolic BP at 3 months between groups
 - Secondary: Patient satisfaction using the Consultant Satisfaction Questionnaire



Hypertension Canada Professional Certification Program

Funding Sources:

- Servier Alberta Innovation Health Fund, a partnership between Servier Canada Inc., the University Hospital Foundation and the Alberta Ministry of Jobs, Economy and Innovation
- EPICORE Centre
- Alberta Strategy for Patient Oriented Research (SPOR) Support Unit (Canadian Institutes of Health Research and Alberta Innovates)

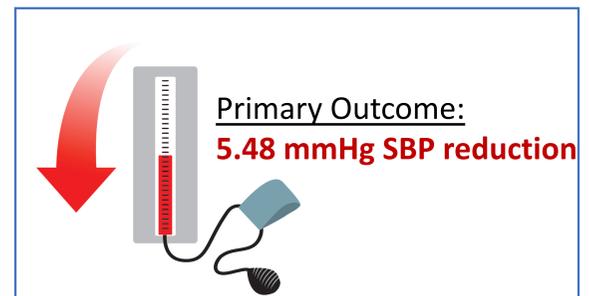
Results:

- We enrolled 890 patients from 61 pharmacies (including 104 pharmacists)

Table 1 Demographics

		Control	Treatment	Control - Treatment	Overall
		(N = 235)	(N = 344)	(N = 311)	(N = 890)
Sex	Male (%)	123 (52.3)	175 (50.9)	179 (57.6)	477 (53.6)
Age, y	Mean (SD)	62.4 (14.4)	60.7 (14.2)	61.9 (14.0)	61.6 (14.2)
BMI	Mean (SD)	30.9 (7.3)	33.4 (30.2)	31.3 (6.9)	31.4 (7.0)
Ethnicity	Caucasian (%)	165 (70.2)	284 (82.6)	249 (80.1)	698 (78.4)
Tobacco	Current (%)	47 (20.2)	51 (14.8)	52 (16.8)	150 (16.9)
	Former (%)	45 (19.3)	110 (32.0)	79 (25.5)	234 (26.4)
	Never (%)	141 (60.5)	183 (53.2)	179 (57.7)	503 (56.7)
Exercise	Very active (%)	16 (6.9)	40 (11.6)	31 (10.0)	87 (9.8)
	Mod active (%)	90 (38.6)	115 (33.4)	90 (29.0)	295 (33.3)
	No exercise (%)	127 (54.5)	189 (54.9)	189 (61.0)	505 (56.9)
Diabetes	N (%)	79 (33.6)	115 (33.4)	113 (36.3)	307 (34.5)
Chronic Kidney Disease	N (%)	28 (11.9)	26 (7.6)	38 (14.2)	92 (10.3)
Dyslipidemia	N (%)	125 (53.2)	171 (49.7)	134 (43.1)	430 (48.3)
Angina	N (%)	19 (8.1)	6 (1.7)	7 (2.3)	32 (3.6)
Myocardial infarction	N (%)	21 (8.9)	10 (2.9)	21 (6.8)	52 (5.8)
Hypertension diagnosis	New (%)	38 (16.2)	75 (21.8)	51 (16.4)	164 (18.4)
	Established (%)	197 (83.8)	269 (78.2)	260 (83.6)	726 (81.6)

- Crude change in systolic BP was 9.9 (SD 16.5) mmHg for the intervention group and 9.9 (SD 16.2) mmHg for the control group.
- Using a linear mixed-effect model with BP reduction as the dependent variable and independent variables of treatment allocation, baseline BP, site effect, and patient effect, the intervention was associated with a 5.48 (95% CI -8.04, -2.91, p<0.0001) mmHg systolic BP reduction at 3 months.



- Patient satisfaction using the Consultant Satisfaction Questionnaire was high at 76 (of 90 total)

Conclusions

- Most educational programs are not evaluated at the patient care level
- The HC-PCP taken by pharmacists resulted in a 5.48 mmHg systolic BP reduction over 3 months in their patients with poorly controlled hypertension
- Patient satisfaction with pharmacist care was high
- This program could be scalable to improve detection and control of hypertension
- Limitations:
 - Alberta has a full scope of practice for pharmacists, including prescribing, so results might not be generalizable
 - Selection bias for pharmacists interested in hypertension and contamination of the control group*
 - Short follow-up of only 3 months*
 - The COVID-19 pandemic (we started in September 2020)*:
 - challenges for staffing and workloads in pharmacies
 - difficult for pharmacists to complete the HC-PCP
 - site dropouts
 - patient reluctance to present for follow-up visits

* may have also decreased intervention effect

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