

Providence St. Joseph Health

Providence St. Joseph Health Digital Commons

Providence Pharmacy PGY2 Program at
Providence Medical Group

Oregon Academic Achievement

4-29-2020

Impact of pharmacist-led appointments for hypertension management in a primary care setting: a retrospective analysis

Anne Marie Thibodeaux

Providence Medical Group, Anne.Thibodeaux@providence.org

Christine Doran

Providence Medical Group, Christine.Doran@providence.org

Ben Rosati

Providence Medical Group, Benjamin.Rosati@providence.org

Follow this and additional works at: https://digitalcommons.psjhealth.org/pharmacy_PGY2



Part of the [Pharmacy and Pharmaceutical Sciences Commons](#)

Recommended Citation

Thibodeaux, Anne Marie; Doran, Christine; and Rosati, Ben, "Impact of pharmacist-led appointments for hypertension management in a primary care setting: a retrospective analysis" (2020). *Providence Pharmacy PGY2 Program at Providence Medical Group*. 1.
https://digitalcommons.psjhealth.org/pharmacy_PGY2/1

This Poster is brought to you for free and open access by the Oregon Academic Achievement at Providence St. Joseph Health Digital Commons. It has been accepted for inclusion in Providence Pharmacy PGY2 Program at Providence Medical Group by an authorized administrator of Providence St. Joseph Health Digital Commons. For more information, please contact digitalcommons@providence.org.

Impact of pharmacist-led appointments for hypertension management in a primary care setting: a retrospective analysis

Anne Marie Thibodeaux, PharmD, MPH
Christine Doran, PharmD, MBA, BCACP
Ben Rosati, PharmD, BCACP

BACKGROUND:

- High blood pressure is a major risk factor for heart disease and stroke, two of the leading causes of death for all Americans.¹
- Optimal blood pressure (BP) management often requires frequent monitoring and follow-up, which primary care physicians (PCPs) can have difficulty maintaining.²
- Evidence supports pharmacist-led hypertension (HTN) management, as it can result in BP reduction.³

OUTCOMES:

- Primary outcome:
 - Evaluate the impact of pharmacist-led HTN management on HTN metric data
- Secondary outcomes:
 - Number of medication interventions made during each visit
 - Change in BP within 4 months compared to patients being managed by PCP

METHODOLOGY:

- Primary outcome:
 - Hypertension metric inventory, defined as:
 - Percentage of patients whose most recent blood pressure was at goal
 - HTN metric goal defined as:
 - Age 18-59 years: $\leq 140/90$
 - Age 60+ years: $\leq 150/90$
 - Pt w/ diabetes: $\leq 140/90$
- Secondary outcomes:
 - Patients who had a clinical pharmacy specialist (CPS) visit for hypertension between February 2019 to November 2019 were identified
 - Chart reviews were utilized to obtain data
 - Propensity matching was used to identify an equivalent number of patients within included clinics whose HTN was managed by their PCP
 - Two-tail sample *t* test compared the systolic BP reduction between the two groups

REFERENCES:

1. Centers for Disease Control and Prevention. (2019). High Blood Pressure. Retrieved from <https://www.cdc.gov/bloodpressure/index.htm>.
2. Egan BM, Sutherland SE, Rakotz M, et al. Improving hypertension control in primary care with the measure accurately, act rapidly, and partner with patients protocol. *Hypertension*. 2018; 72:1320-1327.
3. Jaffe MG, Lee GA, Young JD, et al. Improved blood pressure control associated with a large-scale hypertension program. *JAMA*. 2013;310-(7): 699-705.

Can pharmacist-led appointments for blood pressure management positively impact hypertension metrics?

RESULTS:

Baseline Characteristics		
Demographics	CPS patients (n=50)	PCP patients (n=50)
Age, years, mean (range)	67.9 (35-94)	70.7 (46-89)
Age over 75, no. (%)	17 (34)	17 (34)
Sex, female, no. (%)	24 (48)	24 (48)
BMI, average (range)	31.6 (20-54)	31.5 (22-46)
Comorbidities, n (%)		
Clinical ASCVD	12 (24)	17 (34)
Atrial fibrillation	3 (6)	7 (14)
Heart failure	4 (8)	5 (10)
Diabetes	13 (26)	17 (34)
CKD	5 (10)	8 (16)

Primary Outcome Data		
Hypertension Metric (%)	Before CPS-led HTN visits established	After CPS-led HTN visits established
Clinic A	74.7	73.5
Clinic B	72.2	65.5

Secondary Outcomes Data		
Blood pressure, %	CPS patients (n=50)	PCP patients (n=50)
At goal during initial visit	38	76
At goal during final visit	80	94
Average change in SBP	-17 mmHg	-8 mmHg
Average change in DBP	-5.8 mmHg	-2.9 mmHg
Interventions, %		
	CPS patients (n=50)	PCP patients (n=50)
Medication added	52	26
Medication discontinued	28	20
Medication dose adjustment	42	28
Non-HTN medication intervention	22	N/A
Total # of interventions per patient, average (range)	2.2 (0-7)	N/A

LIMITATIONS:

- HTN metric definition changed during the study
- Patients seen by CPS only account for a small percentage of the overall metric population
- HTN metric does not always correlate with patient-specific BP goal
- Propensity matching did not match groups for baseline BP

CONCLUSIONS:

- The overall decrease in the HTN metric does not suggest pharmacist-led appointments can positively impact the metric; however, changes in the metric definition interfered with proper assessment.
- Pharmacists provided an average of 2.2 medication interventions per patient, most commonly being adding a medication (52%), dose adjustment (42%), and discontinuation (28%).
- There was a statistically significant systolic BP reduction in the CPS group compared to the PCP group ($p = 0.04$); however, more patients in the PCP group were at their BP goal initially.
- Overall, pharmacists were able to optimize medication regimens during visits, and almost half of the patients seen by a pharmacist were able to achieve their BP goal within 4 months.