

Improvement in Blood Pressure Measures Through Community Pharmacist-Prescriber Coordinated Care



Holly Budlong¹, Adam Rhodes², Lori Simpson¹, Jeri Nowak¹, and Amanda Brummel¹

¹Fairview Pharmacy Services, ²Fairview Health Services

BACKGROUND

- As the healthcare landscape shifts from fee-for-service to pay-for-performance, the focus on improving patient outcomes has increased
- Quantifying the pharmacist's role in impacting quality measures and patient outcomes is imperative for inclusion in coordinated care in the changing healthcare environment
- Fairview pharmacies are uniquely located within Fairview clinics, which provides opportunities for pharmacists to be directly involved in impacting clinic quality measures
- The Blood Pressure Goals Achievement Program (BPGAP) is a pharmacy-based program initiated in December 2012 where participants receive:
 - Pharmacist-provided blood pressure measurements
 - Education regarding blood pressure reading and patient-specific goals
 - Medication recommendations
 - Follow-up recommendation to either the clinic (provider, MTM pharmacist, nurse) or community pharmacy
- Patients can be enrolled directly at the pharmacy or referred from a clinic
- BPGAP program measurements and recommendations are communicated directly to the primary care provider via the EHR

METHODS

- Retrospective analysis** of patients enrolled in BPGAP between January 1, 2013 and May 9, 2015 with the following *inclusion criteria*:
 - At least 1 Internal Medicine or Family Practice encounter during timeframe
 - Age 18-85 at BPGAP enrollment
 - At least 1 follow-up visit with a recorded BP measure within 12 months
- Outcome**
 - Blood Pressure Pass Rate**

$$\frac{\# \text{ of pts with BP at goal (PASS)}}{\# \text{ of patients who met inclusion criteria}} \times 100 = \% \text{ patients at BP goal}$$
 - Blood Pressure Goal**
 18-59 years (<140/90 mm Hg)
 ≥ 18 years with diabetes (<140/90 mm Hg)
 ≥ 60 years (<150/90 mm Hg)
- Analysis**
 - Pass rate at enrollment vs. Pass rate at 12 months
 Pass rate at 12 months based on last BP measure for each patient during the 12-month follow-up period
 - McNemar's test was used to evaluate changes in pass rate

GOAL

This analysis evaluated the impact of the BPGAP program on patients reaching their BP goal

FIGURES

Figure 1: Inclusion criteria

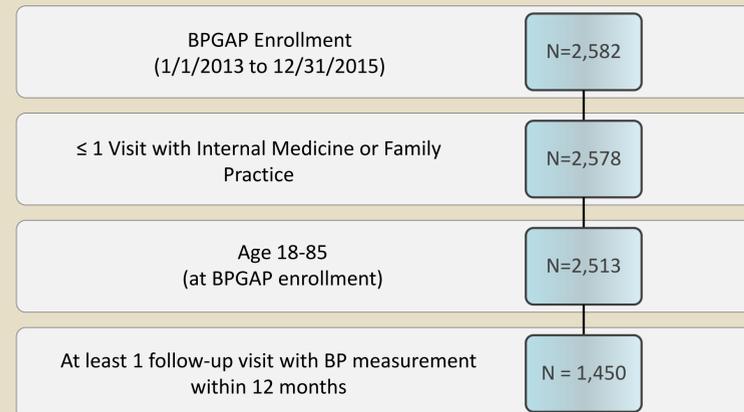


Figure 3: Example of Care in BPGAP Patient

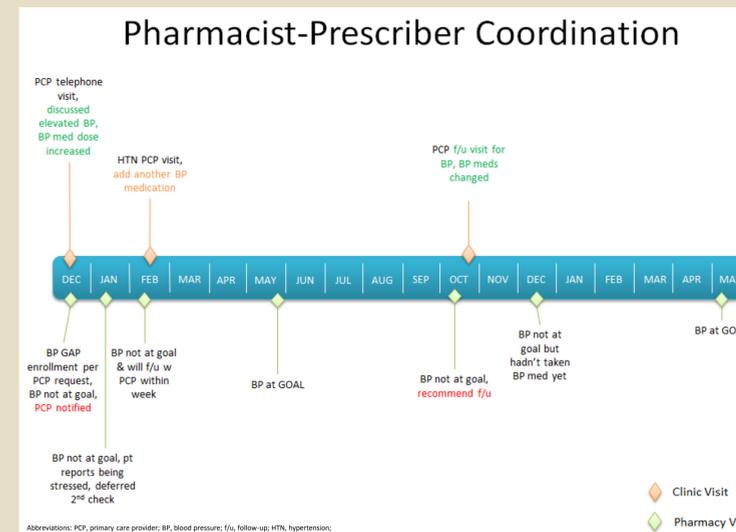


Figure 2: Patient Demographics

| Characteristic | |
|---------------------------------|-------------|
| Total Population, N | 1,450 |
| Age at Enrollment, Mean | 56.6 |
| Female, N(%) | 747 (51.5) |
| White, N (%) | 1278 (88.1) |
| African/African American, N (%) | 72 (5.0) |

Figure 4: Overall Pass Rate

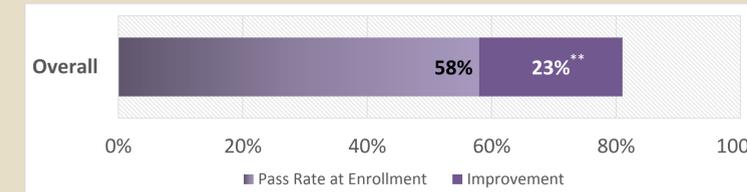
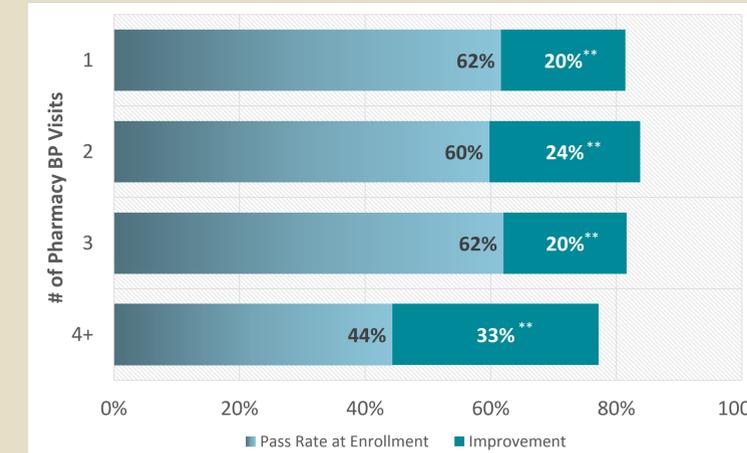


Figure 5: Pass Rate Stratified by # of Pharmacy Visits



** p-value <0.001

RESULTS

- Among the 1,450 patients meeting all inclusion criteria (Figure 1), 51.5% were female, 88.1% were white, and the average age was 56.5 (Figure 2)
- The BPGAP program improved communication and team-based care with other care providers and helped to identify changes in blood pressure between primary care visits (Figure 3)
- Overall, patients enrolled in the BPGAP program had an improvement of 23% in their pass rate (95% Confidence Interval (CI) 20% to 26%, p<0.001) (Figure 4)
- Stratified results show that patients with at least 4 or more pharmacy BP visits had the greatest improvement in BP pass rate (33% improvement (95% CI 25%-41%, p<0.001)) (Figure 5)
- Among patients with the greatest improvement in BP pass rate, we also identified a trend of increased blood pressure visits with the clinic

CONCLUSION

- Pharmacist-provided blood pressure program demonstrated significant improvements in BP pass rates
- Patients seeking BP monitoring at the pharmacy may be more complex or difficult patients due to low BP pass rate at enrollment
- Use of standardized quality improvement indicators in community pharmacy programs creates a standard language to communicate impact to clinics
- Integration within clinic system allows for direct communication and collaboration with providers ultimately improving patient outcomes with the greatest improvement seen in patients who may need the most help
- Further analysis is needed to quantify the association between pharmacy engagement and clinic communication