

Blood Pressure Education to Reduce Hypertension Rates in a Federally Qualified Health Center

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I. Introduction

Hypertension is one of the most common, costly, and preventable cardiovascular disease risk factors in the United States.¹ Our community partner, CVHC is a federally qualified nonprofit community health center that serves rural communities in both Utah and Arizona, traditionally FQHC have even higher hypertension rates.² The clinic currently has 254 patients diagnosed with uncontrolled hypertension. Their goal is to have 60.8% of patients in controlled status in line with Healthy People 2030 goals³.

Research Question: Does video education supporting a home blood pressure monitoring program reduce in-office blood pressure measurements compared to prior to intervention?

We created two educational videos covering the following topics:

- How to correctly measure BP with the Omron device
- Importance of medication adherence and regular follow up visits
- Stress management
- Lifestyle modifications

II. Methods

We conducted a cross sectional, observational study evaluating blood pressure change pre and post intervention at CVHC. Initial data was collected February 11, 2022 and post-intervention data was collected May 13, 2022. Inclusion criteria were patients who are currently enrolled in Creek Valley's home blood pressure monitoring (HBPM) program. They must have been diagnosed with hypertension, defined as one clinic blood pressure reading more than 130/80 in the last year.

Data was de-identified and cleaned by our community partner. We used software program SPSS and Excel for our statistics. We calculated a confidence interval with associated P and z values.



Hypertension Percentages Post Intervention

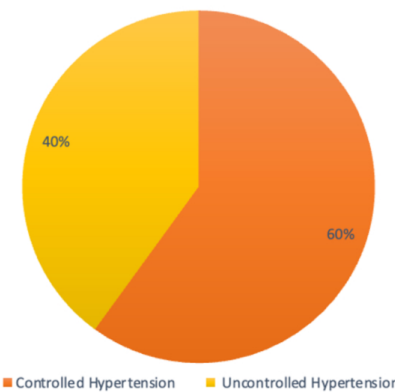


Figure 1— Percentage of patients with uncontrolled hypertension post intervention



Scan Me to watch our educational videos!

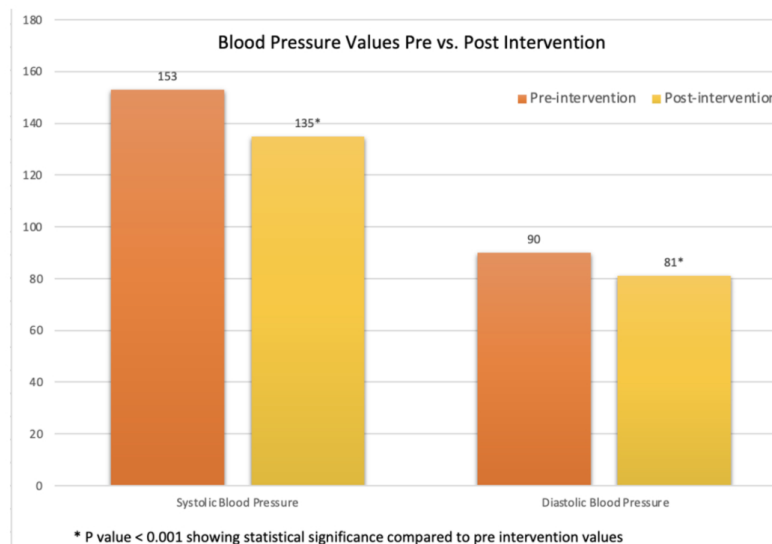


Figure 3 – Average Blood Pressure Values Compared pre and post intervention

III. Results

Initially 100% of our patients had uncontrolled hypertension. Results shows 60% reduction (Figure 2) from uncontrolled to controlled hypertension(130/80), and 62% reduction in men; 69% reduction in women. Mean systolic blood pressure dropped from 153mmHg to 135mmHg and mean diastolic blood pressure dropped from 90mmHg to 82 mmHg. Mean reduction of 18 mmHg systolic and 9mmHg diastolic with a P-value calculation of <0.001. (Figure 3).

IV. Discussion & Conclusions

There was a statistically significant decrease in both systolic and diastolic blood pressure from pre-intervention to post-intervention in our study population as shown by the P value. Therefore, our study showed that video education supporting blood pressure literacy and holistic treatment options in combination with Creek Valley's pre-existing home blood pressure monitoring program improves hypertension outcomes. Some of the main limitations include not being able to fully isolate the effect of our intervention given the pre-existing HBPM program at Creek Valley, not having a control group, not being able to measure how many of the sixty-two participants watched the videos, and the short time frame. A major strength was our results being important indicators for Creek Valley as based on our data, they are meeting their Healthy People 2030 goal of having 60.8% of hypertension patients classified as controlled. Our study has practice implications for Creek Valley and supports that their HBPM program paired with video education may provide a time-efficient, economical way of reaching their quality measure goals. Opportunities for future research include continuing to the project over a 12-month time frame and repeat the study with a control group.

V. References

1. Centers for Disease Control and Prevention. High Blood Pressure Facts. Centers for Disease Control and Prevention. Published 2020.
2. Olomu AB, Gourineni V, Huang JL, et al. Rate and Predictors of Blood Pressure Control in a Federal Qualified Health Center in Michigan: A Huge Concern? *The Journal of Clinical Hypertension*. 2013;15(4):254-263. doi:10.1111/jch.12067
3. CMS. Quality ID #236 (NQF 0018): Controlling high blood ... https://qpp.cms.gov/docs/QPP_quality_measure_specifications/CQM-Measures/2019_Measure_236_MIPSCQM.pdf. Published 2019. Accessed February 28, 2022.