



# TVHC SKILLS TEST

Presented by Hector Sanchez



# Introduction & Background

## Why Blood Pressure Matters:

- High BP is a major risk factor for strokes, heart disease, and kidney failure
- It can go unnoticed without routine monitoring
- BP Management can improve long term health outcomes
- Clinical Interventions play a key role in improving BP control

**“Nearly 1 in 2 U.S. adults has high blood pressure” – American Heart Association**



# OBJECTIVE

- Assess the impact of various interventions on BP control
- Compare pre- and post- intervention blood pressure metrics
- Calculate the percentage of patients achieving BP control (systolic < 140 mmHg and diastolic < 90 mmHg) after intervention
- Identify trends in outcomes by demographic characteristics and provider or site

# KEY FINDINGS SUMMARY

## What I Discovered:

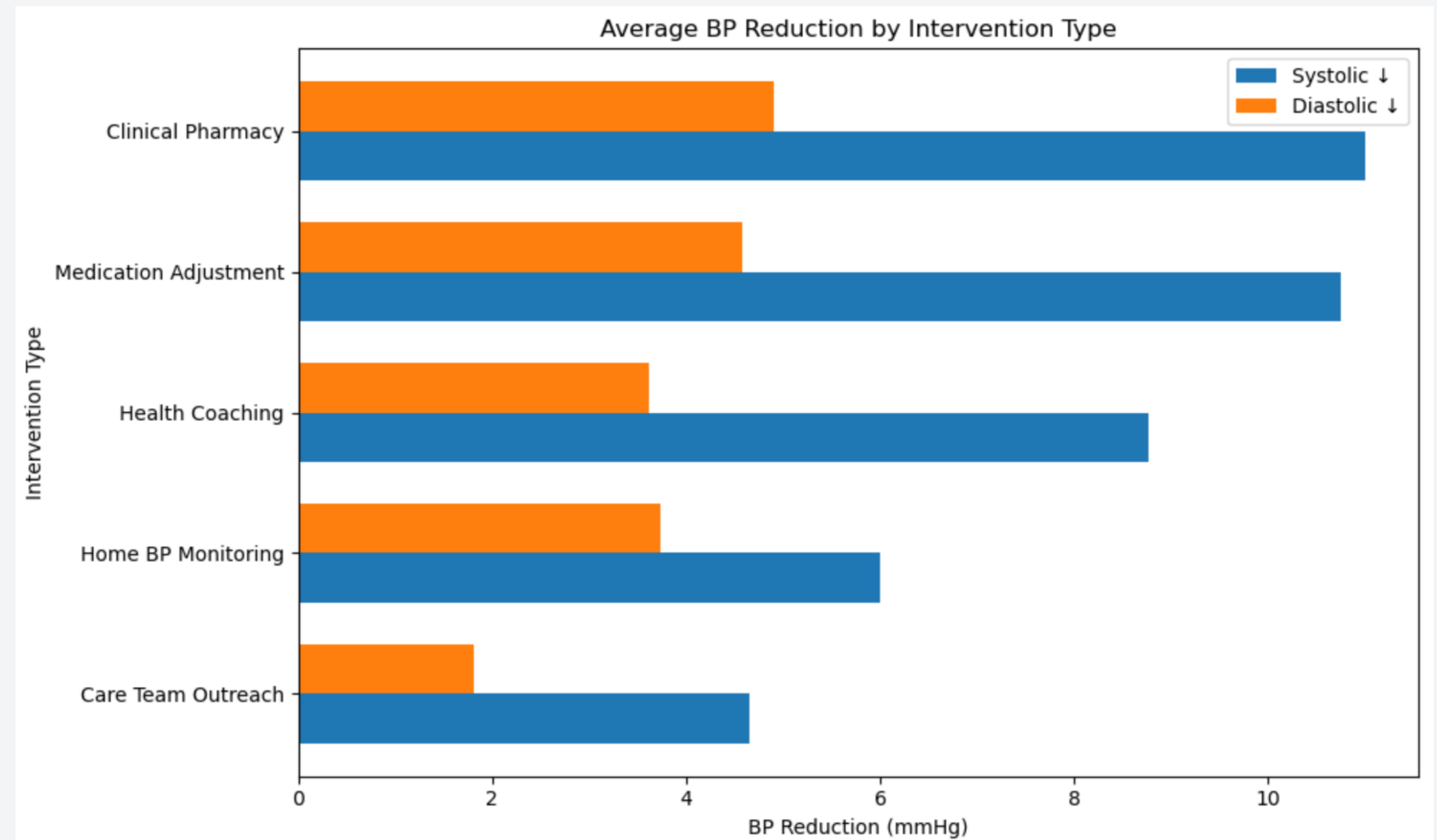
- 60% of patients achieved controlled BP post-intervention
- 25% of patients misclassified, Site A accounted for 56% of errors
- Intervention Effectiveness:
  - Clinical Pharmacy Program: 81.8% control
  - Health Coaching: 76.9%
  - Medication Adjustment: 75%
  - Home BP Monitoring and Care Team Outreach below 41%
- BP control varied by site (52%-71%)
- Demographic Disparities:
  - Males (63.8%) > Females (54.8%)
  - Medicaid/commercial (~63%) > Medicare/uninsured(~56%)
  - BP Control declines with age: 74% (30-44 yrs) -> 48% (60-74 yrs)

# General Intervention Effectiveness

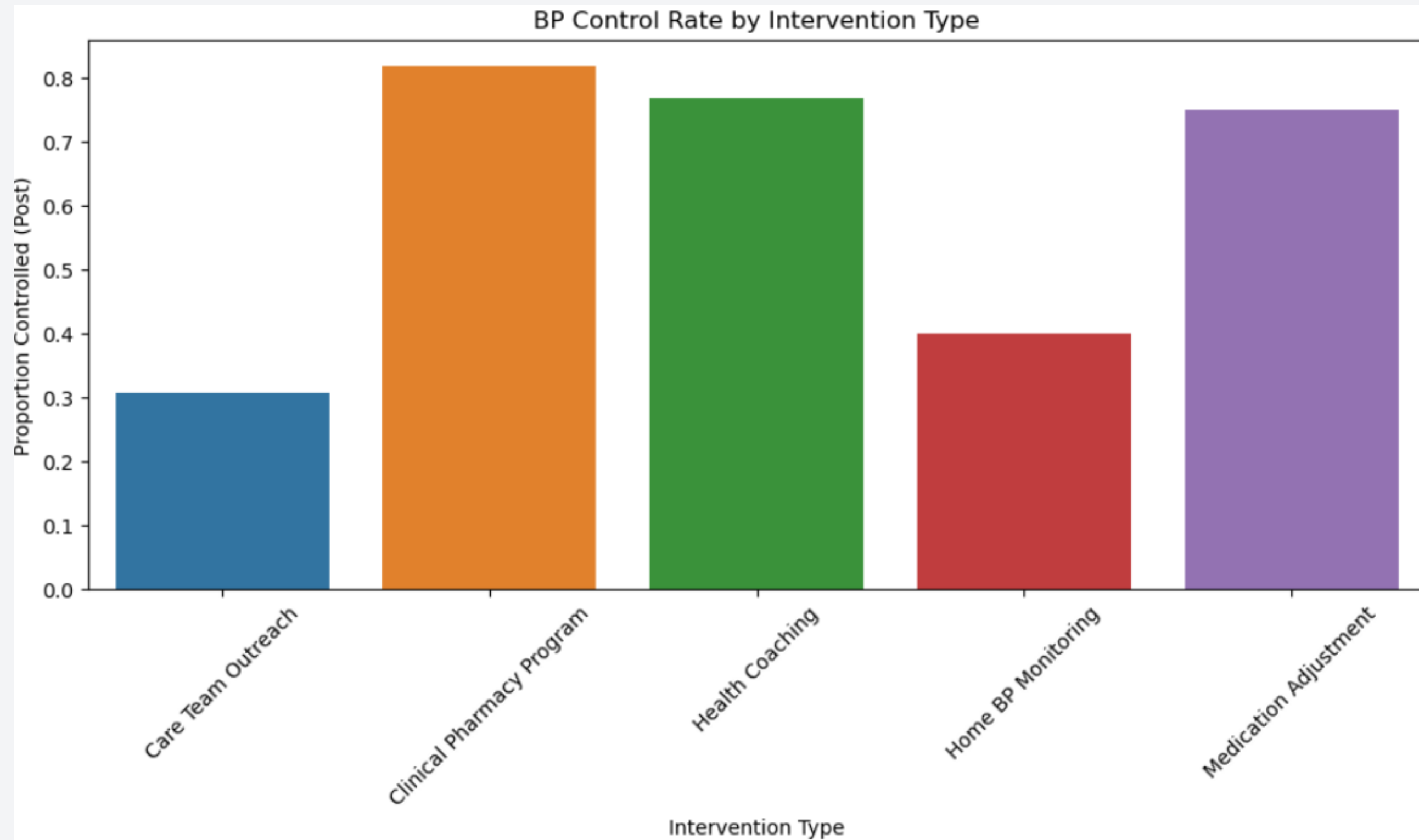
## Blood Pressure Improvements After Intervention

- Average Systolic BP dropped by 8.25 mmHg (~6% decrease)
- Average Diastolic BP dropped by 3.68 mmHg (~4% decrease)

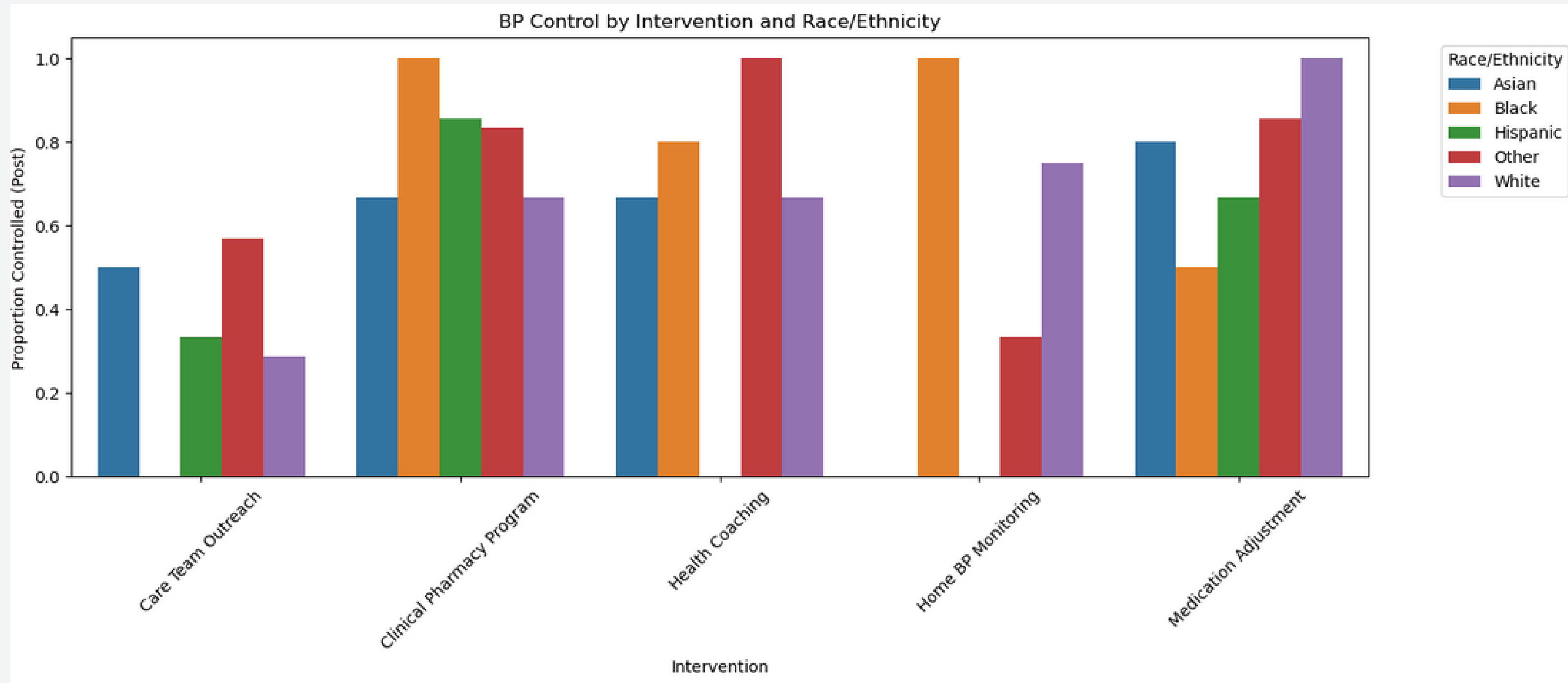
## Blood Pressure Improvements by Intervention



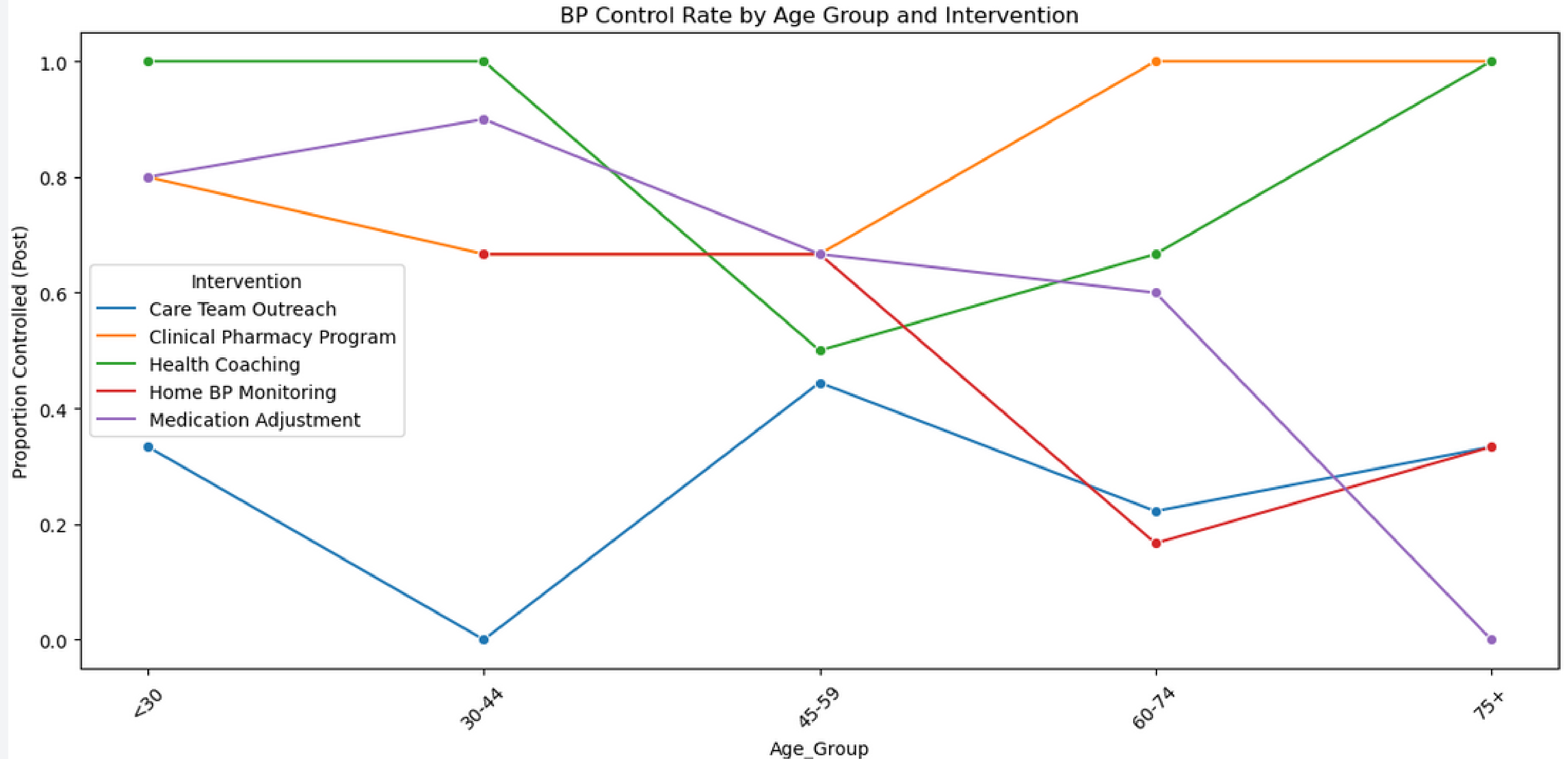
# Effectiveness by Intervention Type



# Effectiveness of Intervention by Race/Ethnicity

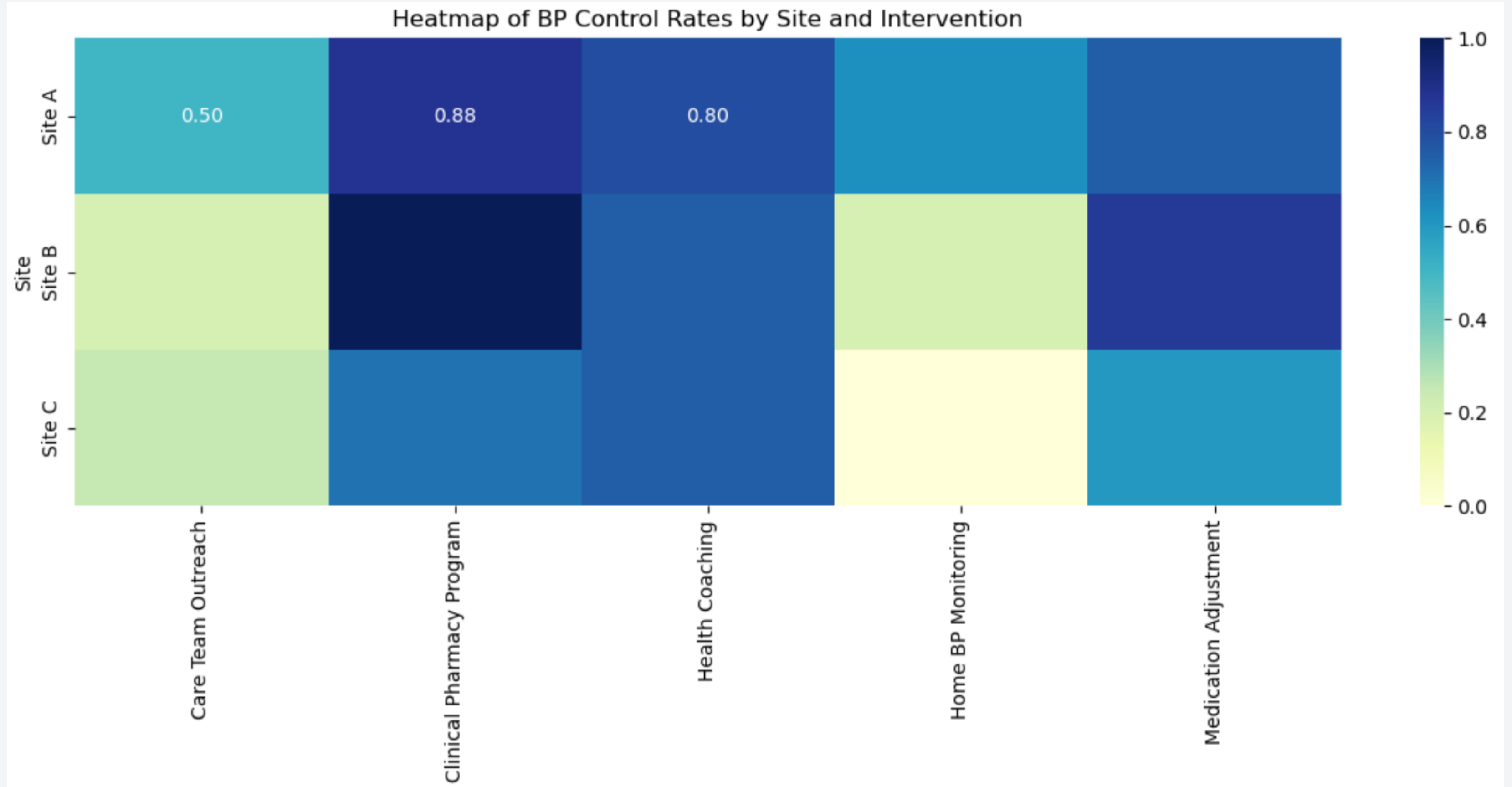


# Effectiveness of Intervention by Age Group





# Effectiveness of Intervention by Site





# EQUITY & DEMOGRAPHICS

## Who Benefits Most?:

- Males: Higher BP Control (63.8%)
- Clinical Pharmacy Program was effective across ALL race groups
- **Hispanic (64.3%) and Other (67.9%)** race groups had the **highest BP control rates**
- Medicaid patients: Strong outcomes across most interventions (100% in some)

## Who Needs More Support?:

- Females: Lower BP control (54.8%)
- BP Control declined with age: 74% in ages 30-44 and 48% in ages 60-74
- **Black (50%) and Asian (56.3%)** race groups had the **lowest BP control rates**
- Medicare & Uninsured: Lower control (~56%) and less consistent success



# RECOMMENDATIONS

## 1. Improve Data Quality and Accuracy

- **Why:** Large discrepancy between the reported BP\_Controlled\_Post variable and the actual BP values after intervention.
- **Action:** Standardize the criteria used to classify BP control across all sites to ensure data reliability and consistency.

## 2. Expand Access to High-Impact Interventions

- **Why:** Certain interventions (Clinical Pharmacy Program) showed significantly better improvements in systolic and diastolic BP.
- **Action:** Apply more effective interventions across all patient groups.

## 3. Target At-Risk Populations

- **Why:** Some patient subgroups had significantly lower BP control rates.
- **Action:** Identify high risk segments (by Sex, Race/Ethnicity, Insurance, Age) and tailor interventions to address their specific barriers.



# RECOMMENDATIONS

## 4. Standardize Best-Practices Across Sites

- **Why:** Some sites performed better in reducing BP or applying effective interventions.
- **Action:** Investigate workflows, staffing, and follow up processes at top performing sites and apply learnings to underperforming sites.

## 5. Enhance Reporting Metrics

- **Why:** Tracking average changes in BP offers more nuance than binary “controlled/uncontrolled” outcomes and helps highlight meaningful improvements.
- **Action:** Integrate mean BP change and percent improvement metrics into clinical dashboards to support data driven decision making.



# Q&A/Appendix

**View My Full Analysis and Slides on Github:**

<https://github.com/hesanche94/TVHC/tree/main>





**THANK  
YOU!**