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:

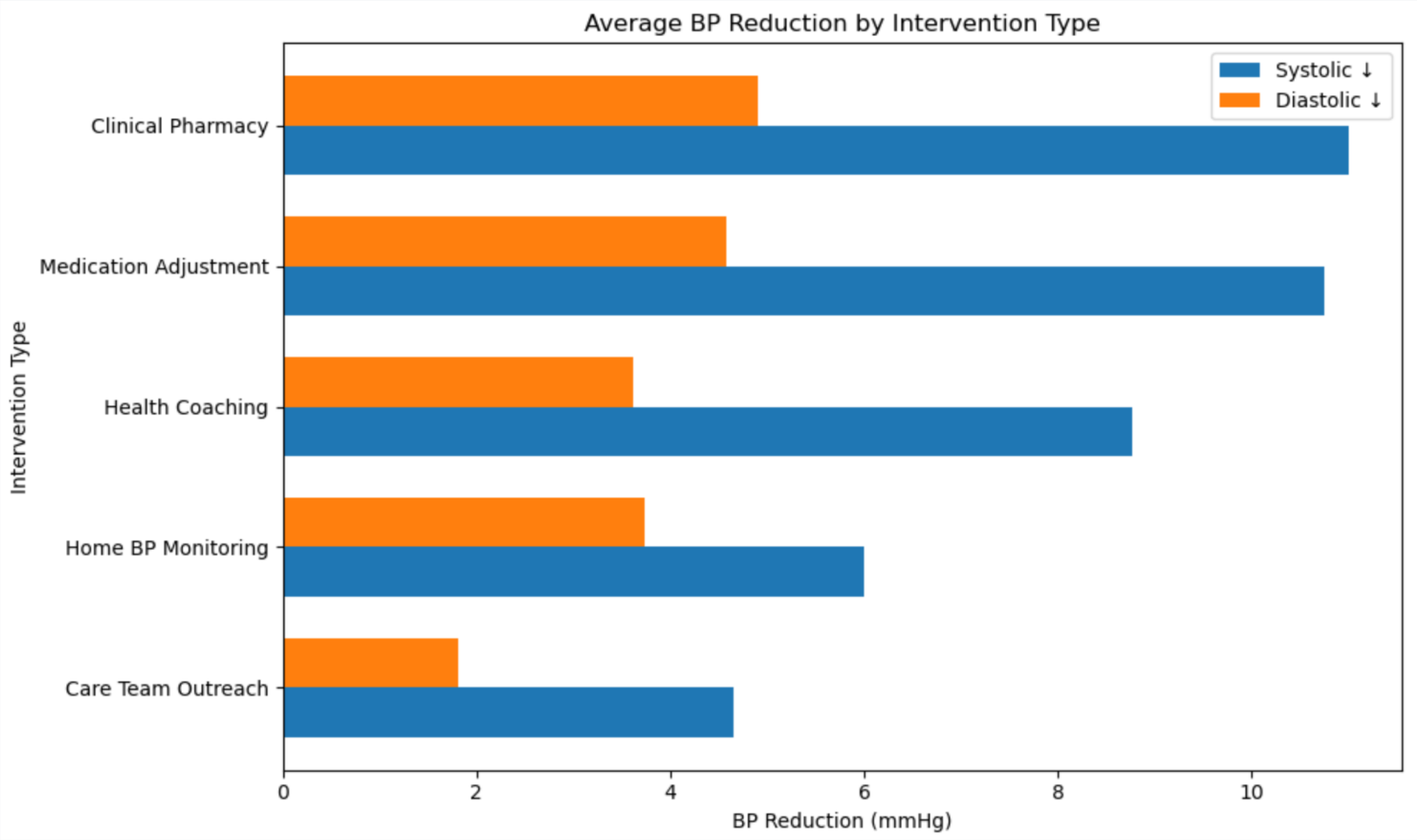
- **60% of patients** achieved **controlled BP post-intervention**
- **25% of patients misclassified**, Site A accounted for 56% of errors
- **Intervention Effectiveness:**
  - **Clinical Pharmacy Program:** 81.8% control
  - **Health Coaching:** 76.9%
  - **Medication Adjustment:** 75%
  - **Home BP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

BEFORE & AFTER RESULTS

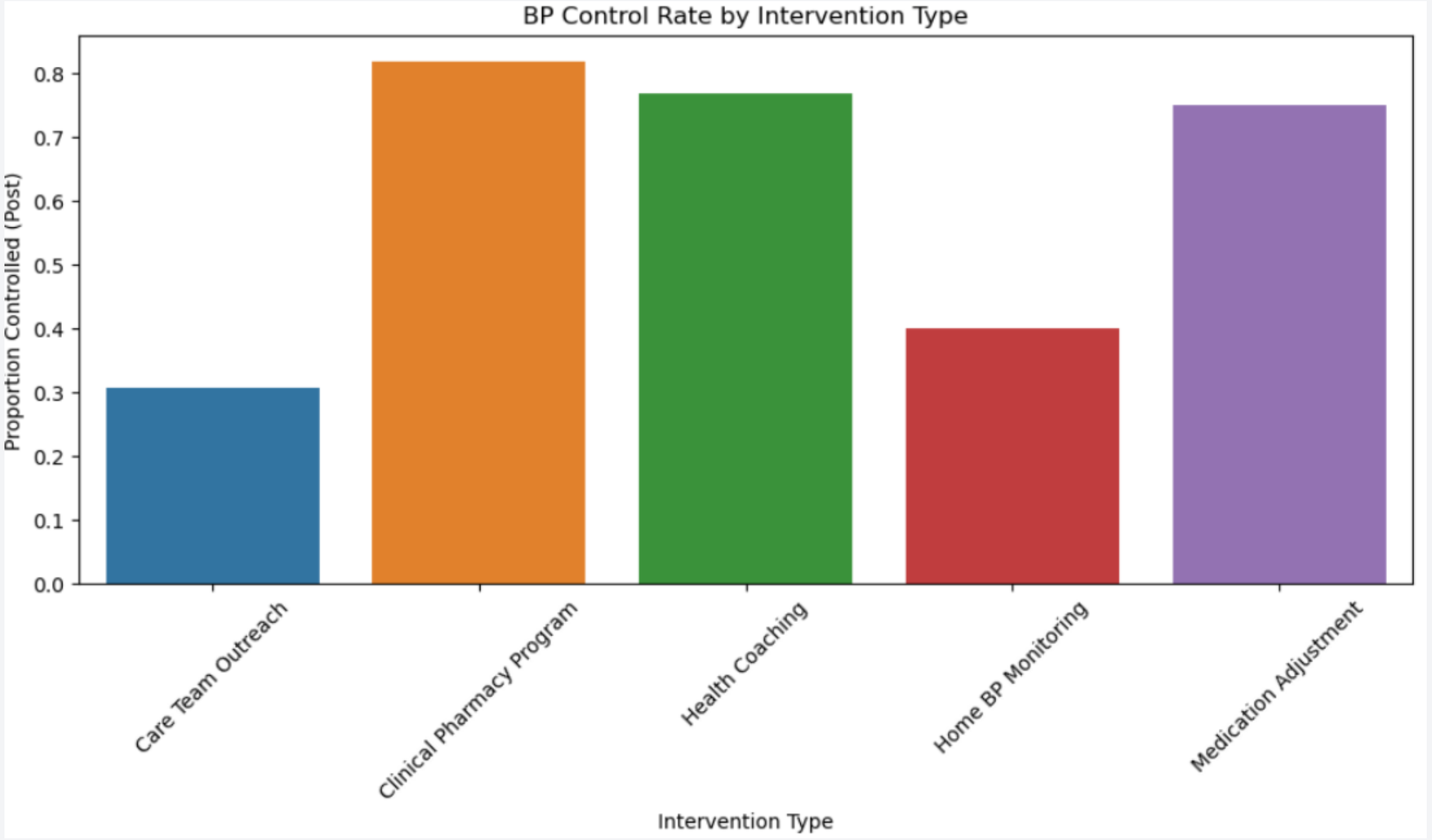
Blood Pressure Improvements After Intervention

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

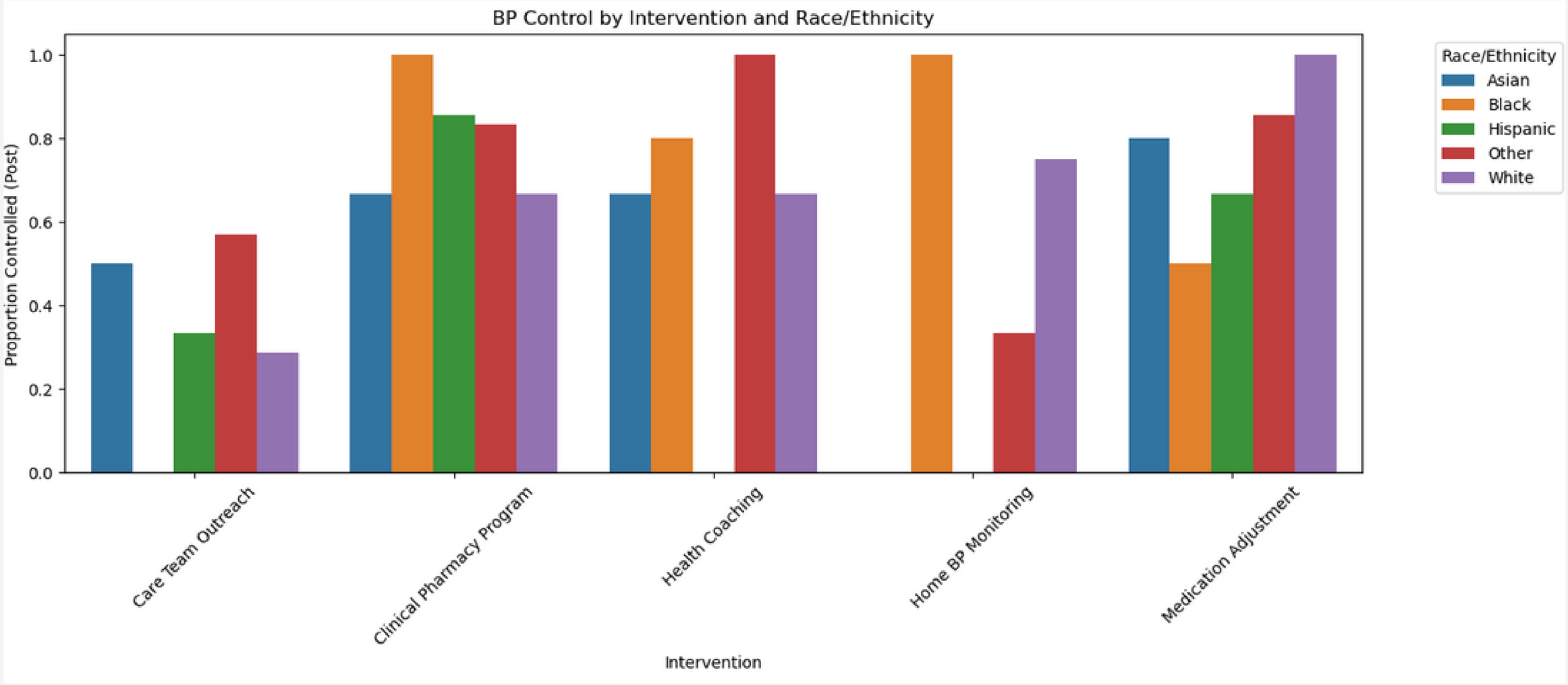
Blood Pressure Improvements by Intervention



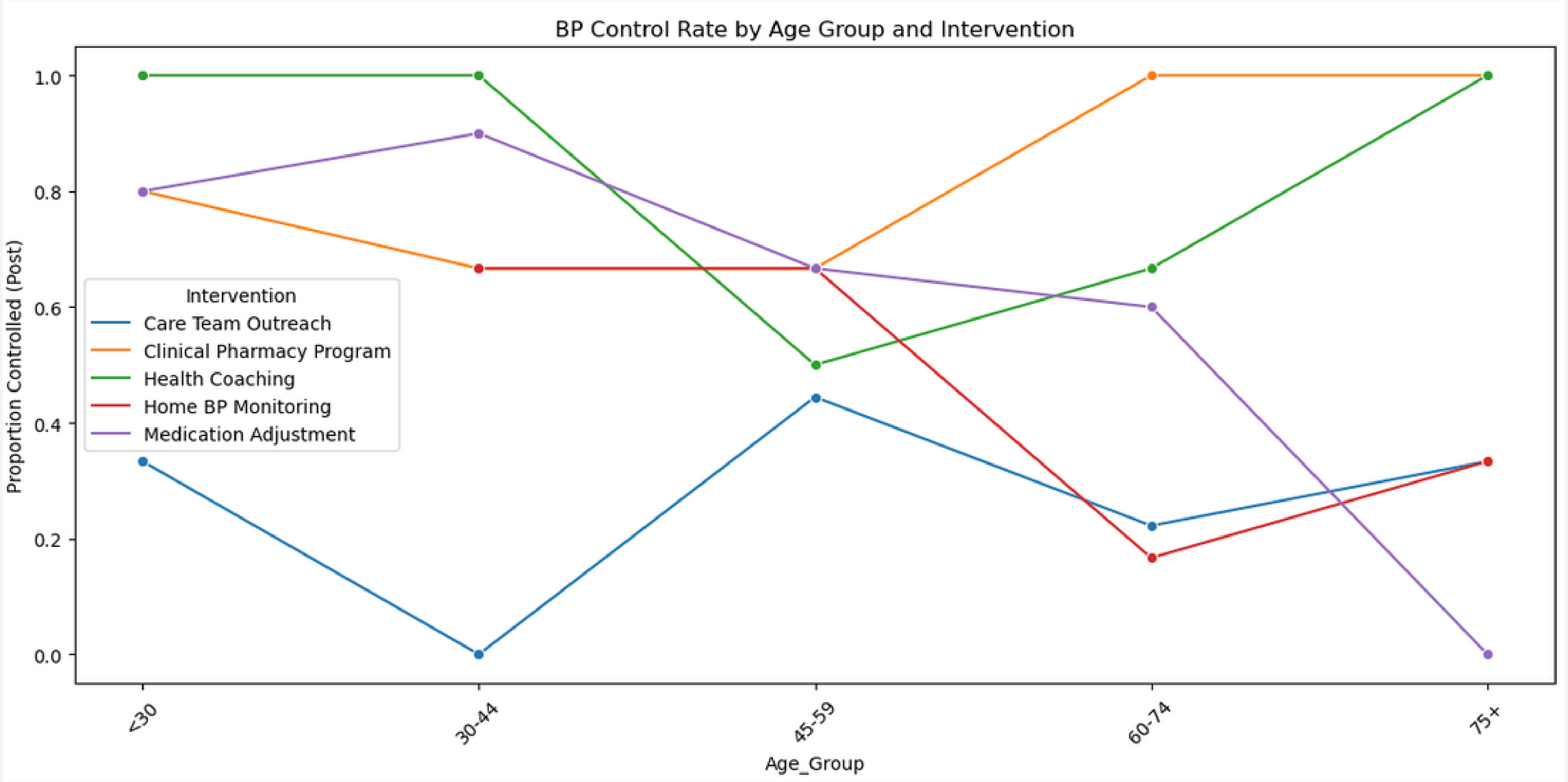
INTERVENTION EFFECTIVENESS



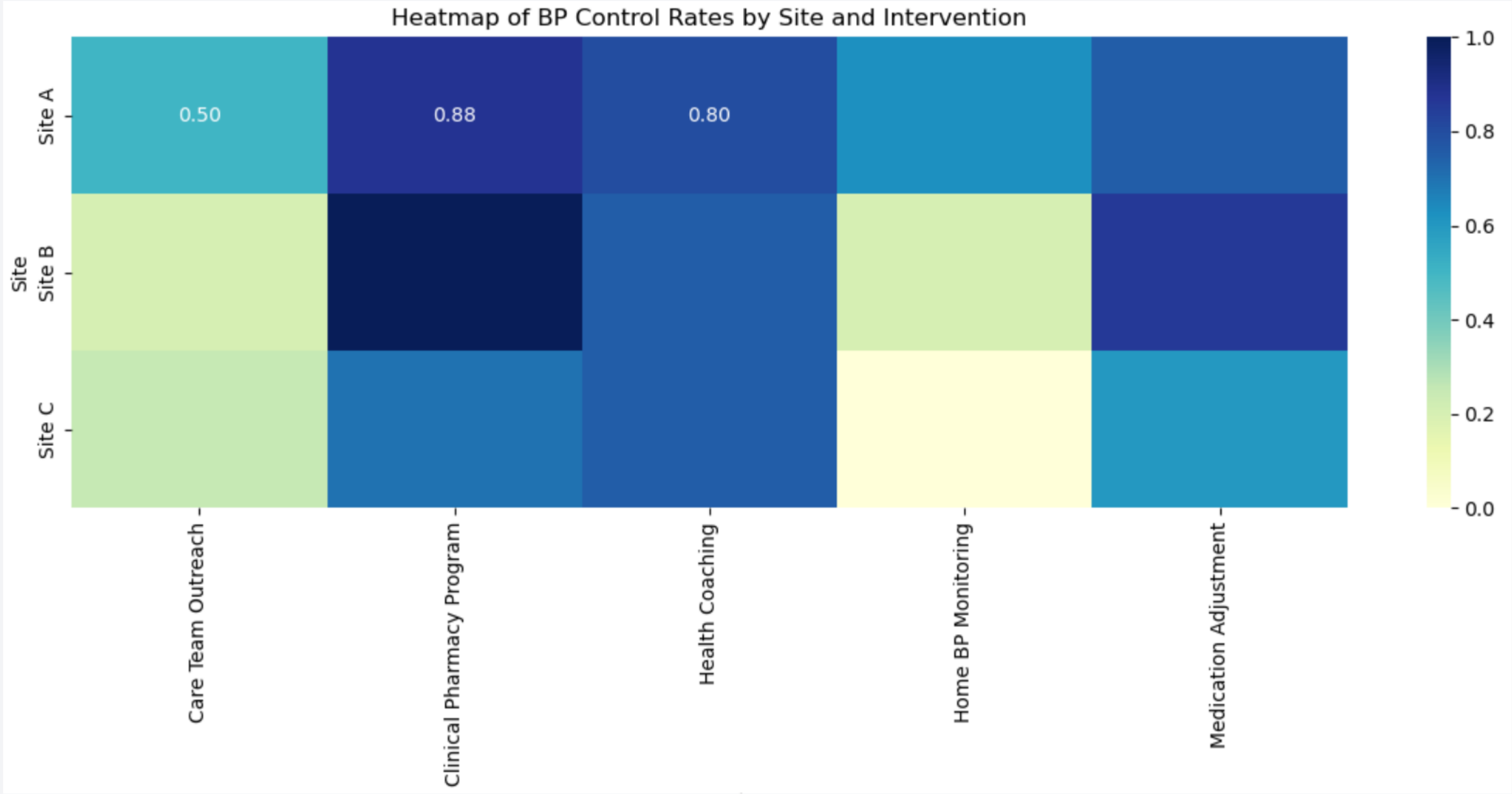
INTERVENTION EFFECTIVENESS



INTERVENTION EFFECTIVENESS



INTERVENTION EFFECTIVENESS



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!