

## **A Collaborative Model to Improve BP Control and Minimize Racial Disparities -CCC 1**

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### **Background**

Blood pressure (BP) is controlled in only 34% of patients with high BP, leading to unnecessary strokes, myocardial infarctions and other cardiovascular events. BP control can be improved with physician/ pharmacist collaborative management (PPCM).

### **Objective**

Our long-range goal is to achieve excellent BP control rates using PPCM that can be implemented in private practices in diverse communities. Our model achieved 89% BP control in an efficacy trial and suggests that PPCM might overcome typical racial and socioeconomic barriers. The objective of this application is to conduct a large multi-center clinical trial in clinics with geographic, racial and ethnic diversity to determine the extent to which the model is implemented. This practice-based research network (PBRN) is unique with a large minority population and great diversity in operation and community size. This prospective, cluster-randomized trial uses 27 clinics, matched and randomized to the active intervention (2 groups) or a control group in 648 patients. Following 9 months of the intervention, one intervention group will continue the intervention following 9 months while the other will discontinue it. We will also randomize 18 patients per clinic into a passive observation group (n=486) to determine if PPCM is implemented more broadly in the clinic. Patients in all three groups will be followed for 24 months. We will accomplish our objectives and test our central hypothesis by pursuing the following aims:

- Aim 1: To determine if patients in clinics randomized to PPCM can achieve better BP control at 9 months compared to patients in clinics randomized to the control group. Primary Hypothesis: BP control at 9 months will be significantly greater in patients from clinics randomized to the two PPCM BP intervention groups compared to the control group.
- Aim 2: To determine if patients in clinics randomized to continuation of PPCM achieve better long-term BP control compared to patients in clinics randomized to discontinuation of PPCM after 9 months and to patients in control clinics.

### **Methods**

Our innovative approach addresses critical organizational barriers and challenges existing approaches to achieving better BP control. This study is novel because it will: 1) be the largest study to test this model, 2) use a cluster randomized design to include many more clinics than previously used, 3) use a diverse group of clinics with broad geographic distribution, 4) include large numbers of patients from minority groups to assess potential health disparities, 5) evaluate whether the effect can be sustained long-term, 6) include standardized BP measurements rather than error-prone office BPs, 7) minimize selection bias, and 8) evaluate a "passive observation group" to evaluate dissemination of PPCM throughout the practice. We expect that our study will find a 6-8 mm Hg difference in systolic BP which would lead to 20-30% fewer coronary deaths and 25-40% fewer stroke deaths if applied across broadly across similar settings. Public Health Relevance: We expect to achieve a 60% blood pressure (BP) control rate using our intervention

model compared to 35% in the control group and the intervention will overcome traditional disparities in minority and lower socioeconomic groups. A 6-8 mm Hg difference in systolic BP, would result in nearly 20% fewer coronary deaths and 25% fewer stroke deaths if applied across all clinics that currently utilize clinical pharmacists in the U.S.

### **Findings**

Findings are not posted to date

### **Status**

Data collection continues

### **PUBLICATIONS:**

#### **Journal Articles**

Carter BL, Clarke W, Ardery G, Weber CA, James PA, Vander Weg M, Chrischilles EA, Vaughn T, Egan BM, Collaboration Among Pharmacists Physicians To Improve Outcomes Now (CAPTION) Trial Investigators. A cluster-randomized effectiveness trial of a physician-pharmacist collaborative model to improve blood pressure control. *Circulation. Cardiovascular quality and outcomes*. 2010 Jul 1; 3(4):418

#### **Conferences**

Kaboli PJ, Vander Weg MW, Lund BC, Holman JE, Egts S. Improving Hypertension Control in a Behavioral Clinical Trial: What Role did Medication Adherence Play? Poster session presented at: Society of General Internal Medicine Annual Meeting; 2010 Apr 30; Minneapolis, MN.

#### **Support**

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