



Patient Activation Measure as an Assessment Tool for Blood Pressure Control in a Randomized Controlled Trial of Enhanced Emergency Department Discharge

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# Background

- African-American adults have the highest prevalence of hypertension and lower blood pressure control in the United States compared to Whites and Hispanics.<sup>1</sup>
- **AchieveBP** is a Randomized Controlled Trial (RCT) that tested the effectiveness of a health education intervention in a population of African American patients discharged from the Emergency Department (ED) with uncontrolled blood pressure
  - The RCT was designed based on the Information-Motivation-Behavioral model.<sup>2</sup>
- Patient activation—the knowledge, skills, and confidence to manage one’s health—has been linked to improved chronic condition management.
  - Patient Activation Measure (PAM)<sup>®</sup> assesses patient levels of activation according to a scale of (1) least activated to (4) most activated. The levels are described as (1) *awareness*, (2) *confidence*, (3) *action*, or (4) *maintenance*.<sup>3</sup>

1. Benjamin, E.J., et al., Heart Disease and Stroke Statistics-2019 Update: A Report From the American Heart Association. *Circulation*, 2019; 139(10), e56-e528.

2. Fisher, Jeffrey D., and William A. Fisher. The information-motivation-behavioral skills model. *Emerging theories in health promotion practice and research: Strategies for improving public health*, 2002; 1, 40-70.

3. Hibbard, J.H., et al., Development of the patient activation measure (PAM): Conceptualizing and measuring activation in patients and consumers. *Health Services Research*, 2004; 39(4), 1005-1026.

# Study Objective

- Primary aim of this study
  - To determine if enhanced discharge from the emergency department (ED) using a health education kiosk-based intervention would improve blood pressure control
- Secondary aim of this study
  - To explore patient activation and motivation

# Methods

- Consolidated Standards of Reporting (CONSORT) guidelines was used for patient recruitment, consent, and enrollment.<sup>4</sup>
- Blood pressure measurements and the 13-item PAM<sup>®</sup> assessment were completed at baseline with follow-up at 30 days, 90 days, and 180 days.

4. Hopewell, S., et al., CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. *PLoS Med*; 2008. 5(1), e20.

# Results

- Preliminary results include the demographics of the total sample size
- PAM analysis was only completed for baseline data

**Table 1. Demographics**

<b>Total sample size</b>	139
<b>Mean age</b>	47
<b>Gender</b>	
Female	68 (49%)
Male	71 (51%)
<b>Education</b>	
<High school degree/GED	109 (78%)
>Associate degree	30 (22%)

**Table 2. Sample at Baseline**

PAM Levels	Control	Intervention	Total
<b>Level 1</b>	3 (5%)	7 (11%)	10 (8%)
<b>Level 2</b>	19 (30%)	20 (31%)	39 (30%)
<b>Level 3</b>	34 (54%)	27 (42%)	61 (48%)
<b>Level 4</b>	7 (11%)	11 (17%)	18 (14%)
<b>Total</b>	63	65	128

\*This sample excluded outliers including unusual answer patterns (i.e. All answers were "Strongly Agree") and participants that did not complete the PAM assessment at baseline.

# Conclusion

- At baseline, 62% (n=79) patients were assigned to level 3 or level 4 based on their PAM<sup>®</sup> scores, indicating that they could take action and maintain their health under stress.
- 38% (n=49) patients were scored at level 1 or level 2, demonstrating that they are candidates for additional interventions.
- PAM<sup>®</sup> could help identify patients who would benefit from primary care linkage.

# Public Health Implications

- African American patients remain at high risk for uncontrolled blood pressure and could thus benefit from additional research regarding patient activation and motivation.
- This was acknowledged in *Healthy People 2030* and the 2017 American College of Cardiology/American Heart Association *Guidelines for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults*.<sup>5</sup>

5. Muntner, P., et al., Potential U.S. Population Impact of the 2017 ACC/AHA High Blood Pressure Guideline. *J Am Coll Cardiol*, 2018; 71(2), 109-118.