

# Identifying Hypertension Interventions for Vulnerable, Urban African American Primary Care Patients: Literature Review and Patient Perspectives

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## INTRODUCTION/BACKGROUND

### HYPERTENSION (HTN) PREVALENCE IN AFRICAN AMERICANS (AA)

- HTN is more prevalent in AA (51.7%) than white individuals (43.6%)<sup>1</sup>
  - AA are more likely to suffer adverse HTN consequences including cardiovascular disease and death<sup>2</sup>
  - Among young AA (18-44 yo), 30% have HTN<sup>3</sup>
- Increased prevalence is attributable to many factors, including structural racism, distrust of the health care system, and lacking access to care<sup>3,4</sup>
- In our urban primary care residency clinic, a 10% disparity in HTN control between young African American patients and young white patients was found

## PURPOSE

- Identify interventions associated with improved HTN control in urban, vulnerable<sup>6</sup>, young (18-50 yo) AA patients in a primary care (PC) residency program

## METHODS

### LITERATURE SEARCH

- Conducted in collaboration with a medical librarian to identify interventions applicable to vulnerable urban AA populations
- Articles coded by publication year, article type, population studied, intervention, results, and barriers via spreadsheet

### PATIENT DISCUSSIONS – QUALITY IMPROVEMENT (QI)

- Random sample of AA patients (18-50 yo) with uncontrolled HTN in urban primary care clinic
- Vetted by clinic staff as likely responsive to discussion with med student
- Contacted via phone to explore interventions most applicable to their care
- Open-ended and Likert scale items focused on:
  - Long-term effects of HTN
  - Barriers to HTN control
  - Interest in working with a PC physician to address their HTN including use of home blood pressure monitoring (HBPM)<sup>5</sup>
- After 3 unsuccessful contact attempts, a different patient from the random sample was contacted for this QI effort

## RESULTS

### LITERATURE SEARCH

- 49 articles identified spanning 1998-2021
- Interventions focused on HBPM coupled with education and/or lifestyle changes
  - Interventions typically multi-faceted - difficult to determine effect of any one intervention<sup>5</sup>
  - Populations were rarely young adults under 50

### PATIENT DISCUSSIONS

- 9 patients responded
  - Knowledge of physiology and long-term consequences of uncontrolled HTN varied but was generally limited
  - Patients were asked about access to safe housing, safe exercise space, healthy, affordable food, and medication; Most respondents did not view these factors as barriers to controlling their HTN
  - Patients largely viewed HTN as a problem to work on independently through diet, exercise, and medication
- Likert Scale responses with scale of 1-4 (1 not really concerned, 4 very concerned)
  - Patients were relatively concerned about their BP (mean 2.9, range 1.5-4.0)
  - Patients were very interested in working to lower their BP (mean 3.4, range 2-4)
- 44.4% had monitors, but 50% were wrist cuffs; 100% deemed HBPM a viable intervention

“I didn’t have high blood pressure until I had a heart attack at age 37...I have high blood pressure due to chronic pain.”

“Not sure.”

“[I] can’t run like [I] used to. I used to be able to run four blocks, now I’m lucky if can run two blocks or even walk around the block.”

“I don’t know.”

*Statements from clinic patients, when asked about what having high BP does to their health over time.*

### Selected Terms & References

1. Ostchega Y, Fryar CD, Nwankwo T, Nguyen DT. Hypertension Prevalence Among Adults Aged 18 and Over: United States, 2017-2018. *NCHS Data Brief*. Apr 2020;(364):1-8.
2. Camethon MR, Pu J, Howard G, et al. Cardiovascular Health in African Americans: A Scientific Statement From the American Heart Association. *Circulation*. 2017;136(21):e393-e423.
3. Parcha V, et al. Prevalence, Awareness, Treatment, and Poor Control of HTN Among Young African American Adults: Race-Stratified Analysis of the National Health and Nutrition Examination Survey. *Mayo Clin Proc*. 07 2020;95(7):1390-1403.
4. Maraboto C, Ferdinand KC. Update on hypertension in African-Americans. *Prog Cardiovasc Dis*. 2020 Jan - Feb 2020;63(1):33-39. doi:10.1016/j.pcad.2019.12.002
5. Uhlig K, Patel K, Ip S, Kitsios GD, Balk EM. Self-measured blood pressure monitoring in the management of hypertension: a systematic review and meta-analysis. *Ann Intern Med*. 2013;159(3):185-94.
6. Edgoose J. **Vulnerable** (term). Personal communication UWSPH. Replaces “underserved” as it raises questions re: who labels them as underserved, who “serves” them. Vulnerable describes patients with historically-limited health literacy, access to care, etc.

## CONCLUSIONS

- Patients’ HTN knowledge is limited
- Patient self-reported barriers were discordant with literature yet their stated need to “work on” independently can guide our HTN QI intervention
- Must consider that “barrier” to HTN control could have been better defined to patients
- HBPM was identified in literature as tool to improve HTN control; 100% patient interest
- When paired with pt educ on HTN, may be a viable intervention if HBPM available to this urban, vulnerable AA group in a PC residency clinic