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%)[1]
  - AA are more likely to suffer adverse HTN consequences including cardiovascular disease and death[2]
  - Among young AA (18-44 yo), 30% have HTN[3]
- Increased prevalence is attributable to many factors, including structural racism, distrust of the health care system, and lacking access to care[3,4]
- 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[6], 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)[5]
- 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[5]
  - 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.

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

Selected Terms & References

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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 UWSMPH. 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.