Hypertension Research Paper

Nicholas T. Vitella

Margaret H. Rollins School of Nursing

N102 Care of Adults

J. Wingate, RN

March 29, 2024

Despite substantiated research on its causes and prevention, hypertension remains one of America's primary health concerns. Hypertension, commonly known as "high blood pressure," is the persistent systolic blood pressure of at least 130 mm Hg or diastolic blood pressure of at least 80 mm Hg. Recent studies reveal that approximately 119 million adults in the United States, about half, have hypertension (Centers for Disease Control and Prevention, 2023). Alarmingly, many of those affected are unaware they have hypertension due to the disease's inconspicuous symptoms in its early stages and socioeconomic barriers to diagnosis. Chronically uncontrolled hypertension leads to severe complications within the cardiovascular system and, consequently, systemic damage to the brain, eyes, and kidneys. Fortunately, there are factors that individuals can identify to prevent irreversible damage. Essential hypertension has two main risk factors: predisposed or modifiable, some of which can be reduced or prevented. It can also develop as a secondary complication of other diseases and medications. With so many contributing factors, hypertension has become increasingly prevalent in America; therefore nurses must diligently promote adequate blood pressure management through awareness of the problem and treatment.

Statement of the Problem

Cardiovascular disease and heart attack are the number one cause of mortality in the United States, attributing to approximately 700,000 deaths in 2021 (Centers for Disease Control and Prevention, 2023). Because hypertension is one of the leading risk factors of CVD, healthcare workers and researchers are urgently addressing multifactorial causes of hypertension prevalence. Hypertension definitively has a positive relationship with unhealthy lifestyle choices. Chronic alcohol use, smoking, stress, physical inactivity, poor diet choices, and obesity are all pervasive societal issues and high-risk factors for hypertension. Socioeconomic barriers, such as lack of transportation, access to health insurance, low income, less education, and specific

geographic areas, also contribute to hypertension prevalence. People with low income, less education, and no insurance were found to have a higher rate of uncontrolled blood pressure (Chobufo et al., 2020). Uncontrolled hypertension can lead to additional health concerns, such as coronary artery disease, heart failure, and more systemic diseases. It can cause damage to the kidneys, resulting in chronic kidney disease as well as cerebrovascular disease leading to stroke. All can be affected simultaneously, manifesting as retinal damage or vision loss (Hutchinson & Wilkerson, 2020). These are all deadly complications that will ultimately need to be managed in the hospital. This can result in higher hospital acuity levels, exacerbating staffing and nurse-to-patient ratio issues. Additionally, hypertension can become difficult to treat as many medications can be contraindicated for patients suffering from disorders like kidney disease; it becomes challenging to create a treatment plan that mutually heals all systems. Hypertension can be a primary and secondary issue causing a cyclical effect, making it harder to treat and possibly resulting in extended hospital stays or higher mortality rates. Honing in on effective prevention, screening, and treatment strategies can help alleviate strain on the nursing community.

Risk Reduction/Treatment of the Problem

Addressing modifiable risk factors is essential in prevention and plays a prominent role in diagnosing and treating. Nurses must instill urgency into adopting healthier lifestyle habits by educating the community on risk factors and specific consequences of noncompliance with hypertension. Current recommendations include ceasing smoking, limiting alcohol intake, and engaging in at least thirty minutes of daily activity. This population should also be encouraged to consume a DASH diet, adding fruits, vegetables, whole grains, low fat dairy products, and lean meats into daily meals. Proactively managing stress with reduction strategies can lead to more positive lifestyle choices to aid in the control of their blood pressure. Daily exercise is also

essential, not only for improving blood pressure, but overall health as well. Nurses can promote adherence to these lifestyle changes through support groups and counselor referrals, which have been proven to improve blood pressure (Abdalla et al., 2023). The screening process involves consistent, accurate blood pressure checks and assessing for predisposed risk factors. Screening for a family history of hypertension, diabetes, stroke, renal disease, and CVD helps identify an individuals' increased risk of developing hypertension (Hutchinson & Wilkerson, 2020). Only a minority of people change their habits after diagnosis; therefore, medication is often introduced. If this occurs, both medication and lifestyle changes must be done concurrently; individuals can not solely rely on medication. The main (first line) medications used are beta blockers, angiotensin II receptor blockers, calcium channel blockers, diuretics, and angiotensin converting enzyme inhibitors. These medications help treat blood pressure by directly dilating vessels or indirectly working on other mechanisms in the body. There should be emphasis on consistently taking medications despite symptoms subsiding to maintain a healthy blood pressure. Nurses can also help patients set up administration and refill reminders to help improve medication adherence (Abdalla et al., 2023). Furthermore, addressing individuals' socioeconomic disparities is key in helping overcome barriers to treatment. Evidence-based strategies nurses can employ are establishing open clinic hours for patients who rely on public transportation, using standardized social determinants of health screening tools, and building an inventory of local health workers, social services, and other agencies to refer patients to for assistance (Hannan et al., 2022).

Planning of Teaching Content

Community members will be able to identify five risk factors of hypertension and five preventive ways to keep their blood pressure within normal range. It would also be beneficial to

educate them on how to accurately measure their blood pressure. To achieve this, it would be most effective to give a presentation accompanied by visual aids, blood pressure-taking demonstrations, and supplemental written resources. A tri-fold poster with pictures will help them visualize the most important facts they should take away from the presentation. The supplemental handout can be a cheat sheet for hypertension; it will have more thorough information regarding risk factors, pertinent family history, healthy food choices, stress management activities, and other lifestyle recommendations members should integrate into their lives. It should also highlight the importance of frequent blood pressure checks. Resources in various forms will allow community members to receive the most pertinent information concerning hypertension so that content will be understood and, more importantly, implemented.

Conclusion

Hypertension prevalence and its life-threatening complications has increased the demand for a more proactive approach in preventing this disease. Education provided by healthcare workers and other community members should focus on addressing harmful risk factors and promoting lifestyle modifications needed to maintain a stable blood pressure. To improve effectiveness, nurses must reflect on their own nursing practice regarding prevention, screening, and treatment and continuously update it to mirror the most current evidence-based recommendations. Long-term adherence of blood pressure control prevents the occurrence of pharmacologic interventions and hospitalization for hypertension. When individuals are informed and provided with sufficient resources, they can be empowered to become the most positive influence on their care.

References

Abdalla, M., Bolen, S., Brettler, J. W., Egan, B. M., Ferdinand, K. C., Ford, C. D., Lackland, D. T., Wall, H. K., & Daichi Shimbo. (2023). Implementation strategies to improve blood pressure control in the United States: A scientific statement from the American Heart Association and American Medical Association. *Hypertension*, *80*(10). https://doi.org/10.1161/hyp.0000000000000232

Centers for Disease Control and Prevention. (2023, July 6). Facts about hypertension. *Centers for Disease Control and Prevention*. https://www.cdc.gov/bloodpressure/facts.htm

Chobufo, M. D., Gayam, V., Soluny, J., Rahman, E. U., Enoru, S., Foryoung, J. B., Agbor, V. N., Dufresne, A., et al. (2020). Prevalence and control rates of hypertension in the USA: 2017-2018. *International Journal of Cardiology*. *Hypertension*, *6*, 100044. https://doi.org/10.1016/j.ijchy.2020.100044

Hannan, J.A., Commodore-Mensah, Y., Tokieda, N., Smith, A.P., Gawlik, K.S., Murakami, L., et al. (2022) Improving hypertension control and cardiovascular health: An urgent call to action for nursing. *Worldviews on Evidence-Based Nursing*, 19, 6-15. https://doi.org/10.1111/wvn.12560

Hutchinson, M., & Wilkerson, P., (2020) Hypertension. In Harding (Eds.), Lewis's Medical Surgical Nursing: Assessment and Management of Clinical Problems (11th ed., pp 678-697). Elsevier.