Hypertension: A Country's Crisis

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Hypertension (HTN) is the medical term for high blood pressure. Blood pressure is a measurement used to determine the amount force exerted by the blood onto the walls of blood vessels as it travels throughout the body's circulation (Magder, 2018). It's normal for blood pressure to fluctuate but can become a problem if it is consistently elevated. High blood pressure is a major risk factor for cardiovascular disease, which is currently the leading cause of death in the United States (Xu et al., 2022). About 116 million Americans are affected by HTN, a condition that can be both prevented and catastrophic (National Center for Chronic Disease Prevention and Health Promotion, 2023).

Statement of the Problem

HTN is associated with many systemic complications that can lead to organ failure and death. The heart, brain, peripheral vessels, kidneys, and eyes are among those organs most affected (Wilkerson & Hutchinson, 2020). As blood pressure rises it poses an increased risk for serious complications like myocardial infarction, heart failure, stroke, and renal disease (Wilkerson & Hutchinson, 2020). The cause of primary HTN remains unknown, while secondary HTN may be a result of hormone or organ system abnormalities, drugs, intoxicants, or abrupt discontinuation of sympathetic nervous system antagonistic drugs ("Hypertension," 2023). Risk factors for HTN include age, sex, genetics, ethnicity, race, obesity, dietary habits, sedentary lifestyle, stress, smoking, alcohol consumption, and chronic kidney disease ("Hypertension," 2023). White Coat Syndrome, known as elevated blood pressure while in the presence of health care professionals, can also cause temporary HTN ("Hypertension," 2023). HTN has been a problem in the United States for many years and medical technology, treatment options, and

information are more available than ever, yet statistics show that prevalence continues to increase.

A survey conducted in the United States between 2017-2018 shows that HTN is more prevalent among adults (45.4%) and as age increases, so does the likelihood of diagnosis (Ostchega et al., 2020). Rates are higher in men (51%) than women (39.7%), and among non-Hispanic blacks (57.1%) compared to non-Hispanic white (43.6%) and Hispanic adults (43.7%) (Ostchega et al., 2020). When evaluating education, HTN rates are lowest in college graduates compared to individuals with a high school education or less (Ostchega et al., 2020). Overall, trends of HTN are increasing in the United States when compared to previous years (Ostchega et al., 2020).

The nursing community is greatly affected by the prevalence of HTN. It is within the nursing scope of practice to accurately measure and record blood pressure readings according to the latest standards, possess knowledge of the pharmacologic drug classes used to treat HTN, and provide education on lifestyle modifications and preventative measures for all patients. Nonadherence to the prescribed medication regimen is the leading cause of uncontrolled hypertension (“Hypertension,” 2023). It is imperative that nurses aid patients in finding organized methods to adhere to prescribed medications that fit their individual lifestyle. They also must be able to explain to the patient why the medication is being prescribed, adverse side effects to be reported, and any pertinent administration instructions. Evidence shows that patient education is an effective strategy to improve blood pressure control. In one study, an average blood pressure reduction of 19.1/14.8 mm Hg was seen among patients who attended educational classes provided by a health center (Eck et al., 2021). Enhanced patient education is a vital skill within nursing practice that will greatly benefit patients with HTN.

Risk Reduction/Treatment of the Problem

Evidence based practice for prevention of HTN includes leading an active lifestyle, maintaining a heart healthy diet, smoking cessation, reduced alcohol consumption, weight loss in some cases, and healthy stress management tactics. Guidelines recommend a target blood pressure lower than 130/80 mm Hg ("Hypertension," 2023). Emphasis is placed on patient education and community health promotion to prevent increasing rates of HTN.

Evidenced based practice suggests screening for high blood pressure in adults beginning at age 18 (Kotsis & Stabouli, 2022). Individuals aged 40 and older as well as those at an increased risk should be screened annually ("Hypertension," 2023). However, persons 18-30 years of age with no increased risk and history of normal readings should be screened every 3-5 years ("Hypertension," 2023). Blood pressure is recorded using a manual or automatic sphygmomanometer ("Hypertension," 2023). The latest standards recommend taking the blood pressure reading while the patient is seated, at rest, with feet flat on the floor, and legs uncrossed ("Hypertension," 2023). It's important to use the proper cuff size as one that is too small may record a falsely high measurement ("Hypertension," 2023). To reach a diagnosis of HTN, an elevated blood pressure must be recorded twice, and on two separate occasions (Kotsis & Stabouli, 2022). It is recommended to confirm the diagnosis using routine ambulatory and self-measured home monitoring after the initial elevated office readings (Kotsis & Stabouli, 2022).

Treatment for HTN consists of lifestyle modifications and pharmaceutical management. Pharmacologic treatment focuses on anti-hypertensive drug therapy. Initial treatment typically includes a thiazide diuretic, calcium channel blocker, ACE inhibitor, or angiotensin receptor blocker ("Hypertension," 2023). Dosages may be adjusted, other drugs may be selected, or drugs

may be used in combination, if the initial regimen does not adequately control blood pressure ("Hypertension," 2023).

Positive lifestyle choices can prevent and improve existing HTN. Smoking cessation, reduction of alcohol consumption, and weight loss in overweight individuals can improve overall health. It's important to control cholesterol, blood glucose, and manage blood pressure in those with or at risk for HTN (Wilkerson & Hutchinson, 2020). Living an active lifestyle can help lower blood glucose, lose weight, and benefit the cardiovascular system (Wilkerson & Hutchinson, 2020). The DASH diet is a heart healthy diet recommended for those with HTN, which places an emphasis on intake of fruits, vegetables, fat-free or low-fat milk products, whole grains, fish, poultry, beans, seeds, and nuts (Wilkerson & Hutchinson, 2020). It is recommended to reduce intake of red meats, sugars, and salt (Wilkerson & Hutchinson, 2020). Additionally, it is imperative to cope with stress in a healthy way. Often, during times of stress it is easy for one to choose quicker, less healthy food options, or lean on substances like alcohol or smoking. More beneficial ways of dealing with stress include light exercise, yoga, meditation, or relaxation.

Planning of Teaching Content

At the health fair the learner will be able to understand and verbalize what their blood pressure reading indicates. A normal blood pressure is considered 120/80 mm Hg, elevated is 120-129/80 mm Hg, stage 1 hypertension is 130-139/80-90 mm Hg, and stage 2 hypertension is 140 or higher/90 or higher mm Hg (Kotsis & Stabouli, 2022). In addition, the learner will analyze personal health or behavioral risk factors requiring attention. Using the teach-back method, they will identify examples of lifestyle modifications that can be implemented to improve their blood pressure or prevent it from worsening.

Information will be provided in both verbal and written formats. Important information about complications, risk factors, screening, prevention, treatment, and lifestyle modification will be outlined on a tri-fold poster along with visual aids like charts, and graphics. This information will be discussed verbally with learners and opportunities for questions will be provided. Written information will also be provided on handouts for the learner to take home. Blood pressure readings will be performed manually using a stethoscope and a sphygmomanometer and will be recorded on a small card for the individual to keep.

Conclusion

HTN is a problem in the United States that is not improving despite advances in medical technology and treatment. Though there are many risk factors, there are a multitude of preventative measures. Evidence based practice largely affects the nursing profession including drug and treatment information, screening guidelines and patient educational tools. Nurses must be sources of help for those struggling with or attempting to prevent HTN. Health promotion is imperative to improving the incidence and it will be the focus of content shared at the health fair. Through verbal and written information, provided with attention grabbing graphics and charts, it is our goal to improve the health of our community.

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