

Improving Adherence to Treatment in Hypertensive Patients

Krista F. Whitley

College of Nursing, East Carolina University

Doctor of Nursing Practice

Improving Adherence to Treatment in Hypertensive Patients

This DNP project presented several main points, including the following:

- Educating patients with hypertension about self-management strategies, including physical exercise, dietary modifications, and consistent adherence to prescribed medications, has shown significant effectiveness in improving uncontrolled blood pressure (Burnier & Egan, 2019).
- As indicated by Tam et al. (2020), patients who are actively engaged in managing their uncontrolled blood pressure are likely to observe improvements in their blood pressure levels.
- Following the implementation of the DNP project, 67% of patients showed improvements in their blood pressure at their follow-up visit.
- Providing patients with the knowledge and tools to make positive lifestyle changes is key to successfully managing blood pressure and should be integrated into daily practice (Treciokene et al., 2022).

Background

Hypertension is a prevalent disease seen in healthcare settings. Almost half of the adult population in the United States experiences hypertension, and 77.5% of these individuals have uncontrolled hypertension (Centers for Disease Control and Prevention, 2024b). When a patient's systolic blood pressure reaches 140 mmHg or higher, or their average diastolic blood pressure is 90 mmHg or higher, it is considered uncontrolled (Sakhuja et al., 2021). Patients with uncontrolled blood pressure are at an increased risk of developing other health issues such as cardiovascular disease, heart failure, strokes, heart attacks, and even kidney disease (Burnier &

Egan, 2019). Adhering to treatment is a crucial factor in managing hypertension and its associated complications.

Hypertension is a preventable and treatable condition. However, many patients fail to adhere to their hypertensive medications, make necessary diet and lifestyle modifications, and attend scheduled follow-up visits with their healthcare provider for various reasons (Uchmanowicz et al., 2018). Hypertension management requires strict adherence to avoid frequent doctor visits, trips to the emergency department, and unnecessary hospitalizations (Hamrahian et al., 2022). Uncontrolled hypertension contributes to nearly 500,000 deaths each year (Centers for Disease Control and Prevention, 2022). This chronic condition imposes a substantial economic burden on the nation, totaling around \$200 billion annually in medical costs. Healthcare providers must promote and encourage healthier lifestyles to reduce illness and death, minimize healthcare expenses, and improve the overall health and quality of life of patients (Burnier & Egan, 2019).

Problem

Hypertension significantly contributes to the global mortality risk. Despite the array of available treatments for hypertension, patient adherence remains inadequate, leading to persistent challenges in managing blood pressure. Suboptimal adherence is linked to negative health outcomes, amplified hospital admission rates, and increased medical costs (Burnier & Egan, 2019).

Purpose

Hypertension control presents a major challenge to public health systems, impacting healthcare on all levels. Poorly regulated blood pressure and lack of adherence to hypertensive regimens can have devastating effects. The focus of this DNP project is to address the issue of

uncontrolled hypertension by delivering personalized patient education during office visits. The project aims to implement an educational tool for patients with uncontrolled blood pressure to promote self-management and blood pressure control. The goal of this DNP project is to enrich patients' understanding of their medical condition, optimize blood pressure management and control, and promote adherence to prescribed treatment regimens. This initiative is intended to address the escalating prevalence of uncontrolled hypertension in this practice.

Methodology

Participants included in this project were adults 18 years or older with a confirmed diagnosis of hypertension and an uncontrolled blood pressure reading ($>140/90$) during their office visit. Patients were given a pre-survey during the initial visit to gauge their understanding of uncontrolled blood pressure and a self-management guide. The DNP student then gave verbal instructions on utilizing the self-management guide, including correct blood pressure cuff measurement, a blood pressure diary, strategies for improving blood pressure, healthy dietary changes, physical activity recommendations, and details on the consequences of uncontrolled blood pressure. Patients were asked to establish a goal to work towards by their next visit to help manage their blood pressure. The patient's follow-up appointment was scheduled within 2 weeks to 3 months. Patient monitoring was conducted using a data collection tool without any patient identifiers. During the follow-up appointment, patients submitted their blood pressure log, completed a post-survey, and underwent a blood pressure check. The post-survey was used to reassess the patient's understanding of uncontrolled blood pressure and whether they achieved the goal they set for themselves in the pre-survey. This information was recorded on a data collection tool, which was then analyzed to evaluate any improvement in patient-reported self-management comprehension by comparing the pre- and post-surveys responses.

Results

Twenty-one patients participated in this project, including five (24%) males and 16 (76%) females. Out of all participants, nine (43%) did not make any lifestyle modifications to improve their blood pressure, while 12 (57%) effectively incorporated at least one lifestyle change to enhance their overall well-being. At their next appointment, 14 patients (67%) saw an improvement in their blood pressure readings, while seven patients (33%) still had uncontrolled hypertension.

Strengths and Limitations

Several positive factors drove the success of this project. The project site provided substantial support for integrating this project into practice. Healthcare providers and clinic staff were eager to gain new knowledge and actively participate in the initiative. Key strengths include effective communication, attentive listening, and prompt issue resolution. The project team worked closely together to ensure the project's success and its positive impact on patients and the practice. Effective collaboration and well-designed tactics led to the positive outcome of improved hypertension control and adherence among this patient population.

The implementation of this DNP project encountered several limitations. One challenge was the restricted on-site availability of the DNP student. In addition, patient cancellations, rescheduling, and no-shows posed significant obstacles to planning. Patient compliance also proved to be a limitation, as a portion of patients did not complete the blood pressure diary tool or adhere to their prescribed medication regimen, resulting in unfavorable outcomes during subsequent visits. Moreover, the educational materials were exclusively available in English, thereby limiting their accessibility to non-English speakers. To ensure the sustainability of this

intervention, it is imperative that educational resources be made available in multiple languages in the future.

Implications

The project benefits patients, providers, and the organization by increasing awareness of blood pressure management, promoting essential lifestyle changes, and highlighting the need to improve blood pressure control. The project positively impacted patients as their blood pressure levels improved, preventing further complications of uncontrolled blood pressure and related healthcare costs. This project improves how well patients follow their hypertension treatment, which has a major effect on both patient outcomes and financial stability. This project can potentially improve organization quality metrics and patient risk scores. Its implementation is anticipated to increase the utilization of preventative care by patients, decrease hospital admissions, enhance health outcomes, and promote all six quality improvement objectives: safe, effective, patient-centered, timely, efficient, and equitable care (Health Resources & Services Administration, 2022).

Conclusion

Empowering individuals to take charge of their health has a profound impact on their overall well-being and quality of life (Burnier & Egan, 2019). Healthcare providers are essential in providing patients with the necessary tools for their success (Treciokene et al., 2022). Despite some constraints, the DNP project effectively showcased a robust method for enhancing hypertension adherence among this patient population. The findings from this quality improvement project emphasize the critical importance of improved adherence to hypertension treatment, highlighting that patient education significantly enhances blood pressure control and overall health outcomes.

References

- Burnier, M., & Egan, B. M. (2019). Adherence in hypertension. *Circulation Research*, *124*(7), 1124–1140. <https://doi.org/10.1161/CIRCRESAHA.118.313220>
- Centers for Disease Control and Prevention. (2022). *Health topics – High blood pressure*. <https://www.cdc.gov/policy/polaris/healthtopics/highbloodpressure/index.html>
- Centers for Disease Control and Prevention. (2024). *High blood pressure facts*. <https://www.cdc.gov/policy/polaris/healthtopics/highbloodpressure/index.html>
- Hamrahian, S. M., Maarouf, O. H., & Fülöp, T. (2022). A critical review of medication adherence in hypertension: Barriers and facilitators clinicians should consider. *Patient Preference and Adherence*, *16*, 2749–2757. <https://doi.org/10.2147/PPA.S368784>
- Health Resources & Services Administration. (2022, October). Health literacy. <https://www.hrsa.gov/about/organization/bureaus/ohe/health-literacy>
- Sakhuja, S., Colvin, C. L., Akinyelure, O. P., Jaeger, B. C., Foti, K., Oparil, S., Hardy, S. T., & Muntner, P. (2021). Reasons for uncontrolled blood pressure among US adults: Data from the US national health and nutrition examination survey. *Hypertension*, *78*, 1567–1576. <https://doi.org/10.1161/HYPERTENSIONAHA.121.17590>
- Tam, H. L., Wong, E. M. L., & Cheung, K. (2020). Effectiveness of educational interventions on adherence to lifestyle modifications among hypertensive patients: An integrative review. *International Journal of Environmental Research and Public Health*, *17*(7), 2513. <https://doi.org/10.3390/ijerph17072513>
- Treciokiene, I., Postma, M., Nguyen, T., Fens, T., Petkevicius, J., Kubilius, R., Gulbinovic, J., & Taxis, K. (2021). Healthcare professional-led interventions on lifestyle modifications for

hypertensive patients - a systematic review and meta-analysis. *BMC Family Practice*, 22(1), 63. <https://doi.org/10.1186/s12875-021-01421-z>

Uchmanowicz, B., Chudiak, A., Uchmanowicz, I., Rosińczuk, J., & Froelicher, E. S. (2018). Factors influencing adherence to treatment in older adults with hypertension. *Clinical Interventions in Aging*, 13, 2425–2441. <https://doi.org/10.2147/CIA.S182881>