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Improving Staff Knowledge and Confidence in Hypertension Patient Education Through Health Literacy Training

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Executive Summary: Staff Education Project
Improving Staff Knowledge and Confidence in Hypertension Patient Education Through Health Literacy Training

by

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Executive Summary Submitted in Partial Fulfillment of

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Summary

This DNP staff education project focuses on providing health literacy training. The practice problem identified at the local project site was inadequate patient education it may have resulted from a number of factors,. poor blood pressure control. The practice focused question for this project was as follows: “Will staff education on health literacy and patient education improve staff knowledge and confidence in providing HTN patient education?” The purpose of this doctoral project was to enhance healthcare providers' capacity to deliver effective, evidence based hypertension education. Eventually, providers would acquire effective communication that would improve patient understanding and self-management. Awareness of this issue stemmed from suboptimal hypertension outcomes the need for new strategies to improve blood pressure control. Furthermore, the studies confirmed the effectiveness of dedicated educational interventions in improving hypertension management. The results of this project showed increases of 19.3% and 45% in knowledge scores and self-efficacy, respectively. The implications for the organization included immediate enhancement of care quality and improved alignment with national control metrics. The major conclusion for this project is a demonstrated increase in staff knowledge post-education. The recommendations for the future are mandatory annual refresher training and integration of teach-back protocols into the electronic health record system. The potential implications of this project on nursing practice are the potential to improve outcomes in this population of hypertensive patients. This project has the potential to positively impact social change by dismantling communication barriers that disproportionately affect diverse populations, thereby

fostering health equity.

Background

This paper is a DNP staff education project focused on improving uncontrolled hypertension through education in a primary care clinic. Untreated hypertension remains one of the most crucial preventable causes of morbidity and mortality worldwide, and as such, bridges this practice gap with utmost urgency. If left unattended, hypertension progresses stealthily, most often without evident clinical signs and symptoms, until complex end-stages like strokes, myocardial infarction, heart failure, and chronic kidney disease are reached (Iqbal & Jamal, 2023). These effects decrease life expectancy and considerably lower the quality of life among patients by limiting mobility, autonomy, and overall well-being. Healthcare systems are affected by the under-treatment or inappropriate treatment of hypertension through increased hospitalization, increased use of emergency departments, and increased use of costly advanced treatment. This represents a financial cost to patients and healthcare organizations, straining scarce resources and widening health inequities (Masenga & Kirabo, 2023). Clinically, failure to control hypertension undermines the principles of preventive and evidence-based care, namely early detection, lifestyle modification, and adherence to guideline-based therapies. The gap in practice occurs when patients are not adequately educated, followed up on, or provided with individualized treatment plans to manage their blood pressure effectively. Closing the gap is important not only to reduce adverse health events but to align primary care practice with population health goals at a population level over time.

The practice-focused question for this project was as follows: “Will staff education on health literacy and patient education improve staff knowledge and confidence in providing HTN patient education?” This project promotes nursing practice by enhancing the knowledge and confidence of staff to provide hypertension education to patients through HTN and health literacy training.

Hypertension is a chronic illness that can require patients to adopt significant lifestyle changes and adhere to complex medication regimens. Many patients do not fully understand health information due to varying health literacy, which can lead to barriers to successful self management. When patient education does not incorporate plain language or health literacy principles, opportunities for prevention are lost, and the risk of complications associated with HTN becomes greater (Ashraf et al., 2024).

This project aims to improve patient outcomes by providing health care staff with the skills necessary to facilitate patient communication through leveraging plain language and simplifying complex medical information. They can also learn the skills to assess better patient health literacy and understanding of their medical conditions and treatment plans. Educating patients using health literacy and plain language principles will assist in enhancing their engagement in managing their blood pressure, consequently lowering the risks of stroke, heart attack, and kidney disease. Improved patient self-management translates into fewer emergency visits, reduced hospital readmission, and reduced healthcare costs (Zhang et al., 2021). In addition, this project supports the overall goal of preventive care by integrating nursing practice with evidence-based practices that promote early intervention and patient engagement. Encouraging staff confidence in education transfer fosters a patient-centered culture where nurses serve as providers, teachers, and patient advocates. The project aims to improve patient outcomes by bridging health literacy gaps and increasing the quality and effectiveness of hypertension control.

The evidence that supported this project was the documented reality that achieving widespread hypertension control is not unique to the project site but rather reflects a systemic deficiency across healthcare systems. The American Heart Association (AHA) and the American Medical Association (AMA) emphasize the persistent and urgent need for new implementation strategies

to significantly improve blood pressure control nationwide (Abdalla et al., 2023). This call to action is echoed by experts who emphasize the necessity of addressing this public health crisis to improve cardiovascular health nationally (Hannan et al., 2022). Furthermore, national data confirms that this control failure is not uniform, pointing to long-standing inequities in hypertension control that were both exposed and exacerbated by the COVID-19 pandemic, particularly concerning disparities in access to care and outcomes (Bress et al., 2021). The persistent problem observed at the project site is therefore representative of a broader, documented gap in the delivery of effective hypertension care nationwide.

A primary documented barrier to optimizing care is the gap in systematic implementation and provider knowledge. Recent randomized controlled trials demonstrate that dedicated, structured educational interventions significantly impact hypertension management by primary care physicians, confirming that inadequate or inconsistent training is a widespread issue in clinical practice (Ashraf et al., 2024; Patil & Patil, 2024). This strongly suggests that the suboptimal hypertension outcomes at the project site are rooted in a systematic deficiency in translating clinical guidelines into consistent, practical care, rather than being attributable solely to unique local conditions. This lack of rigorous, systematic education for primary care providers is an evidencebased contributing factor to poor control.

Beyond the provider level, effective hypertension management requires robust patient participation, an area also documented as problematic. Studies conducted among patient populations in low-income and rural areas, which are often served by the project site, have demonstrated a clear link between low blood pressure, health literacy, poor self-management behaviors, and suboptimal outcomes (Zhang et al., 2021; Kurnia et al., 2020). To overcome these patient-facing challenges, objective evidence supports the efficacy of novel, community-based approaches. Specifically, interventions led by nonphysician community healthcare providers

have been shown to deliver effective, intensive blood pressure management and improve outcomes over traditional care (He et al., 2023; Acharya et al., 2024). This body of research validates that the difficulty in achieving control at the project site is supported by documented issues in patient-level engagement, thus justifying the need for a targeted, evidence-based intervention focused on education and self-management support.

Staff Education Project Development

Participants and Procedures

The participants in this project were staff at the DNP project site, including clinic managers, doctors, nurses, and interdisciplinary colleagues like dietitians, pharmacists, and respiratory therapists. Forty healthcare providers participated in the project, and 35 finished the entire education course. The participants were selected based on their role in the process of hypertension management, making the education more effective in influencing patient outcomes and care.

> The methods used to develop this project were comprehensive and involved collaboration with a subject matter expert (SME) reviewer from the healthcare management group. The SME provided critical input on the clinical relevance and practical use of the educational materials. Content was developed through review of current best practices, guidelines, and literature, with direct focus on hypertension management and patient education. I developed educational materials, including

PowerPoint presentations, handouts, and case studies. I also utilized resources from the American Heart Association and other professional organizations to inform evidencebased guidelines for the treatment of hypertension. The pre- and post-knowledge assessment tools were developed using validated questions about the management of hypertension and patient education, with a focus on measuring both knowledge retention and behavior change. The SME reviewed the

clinical content of the educational materials and the validated questions in the pre- and postknowledge assessment tools to ensure their clinical relevance and accuracy. Delivery for this project was made both virtually and in person, depending on the participant's schedule and preference. Pre- and postknowledge tests were administered online through an online survey tool to ensure anonymity and confidentiality of response.

Collection and Analysis of Evidence

The process of collecting the pre- and post-knowledge was administered to participants prior to the education sessions and immediately after the program concluded. Both identical assessments were designed to evaluate the participants' baseline knowledge and the knowledge gain following the education sessions. To maintain anonymity, participants were provided with codes of identification that they would use to enter the knowledge assessments without revealing any personal identifiers. The examination of this evidence entailed comparative and descriptive analysis. Descriptive analysis was used when summarizing data from pre- and post-assessment, including average scores and frequency distribution for all questions. Comparative analysis was next used to determine the difference in the level of knowledge between post- and preassessment. The difference in scores was investigated by performing statistical measures to determine the significance of knowledge gain, and the data were used to quantify the effectiveness of the educational intervention.

Evaluation Process

The data were evaluated using the following process. After collecting the pre- and postassessment results, the data were analyzed in aggregate to identify areas of improvement in the participants' knowledge. The data were de-identified using unique identification codes provided to participants upon their entry into the knowledge assessments. This ensured the anonymity and confidentiality of the staff who participated and took the knowledge assessments,

as no personal identifiers were linked to the scores. The aggregate results were then shared with key stakeholders, including the clinic manager, physicians, and nursing staff, to assess whether the education program met its intended goals of improving hypertension management knowledge. The evaluation was structured to review the effectiveness of the training and to identify any areas where additional resources or support might be needed.

Stakeholder analysis played a crucial role in the evaluation process. Key stakeholders included clinic managers, physicians, nursing staff, patients, and families, as well as interdisciplinary colleagues such as dietitians and respiratory therapists. The clinic manager held significant responsibility for approving the project and ensuring its successful execution. Physicians and nursing staff were consulted throughout the project and provided valuable feedback on the educational materials. The evaluation process ensured that these stakeholders were kept informed, consulted when needed, and actively participated in the program to ensure its success.

Results

The results of this project were clear and demonstrated a statistically significant positive effect of the educational intervention on staff competency. A total of 35 participants completed both the pre- and post-assessments, which measured both objective knowledge (based on current AHA/AMA guidelines for HTN management) and self-reported confidence in applying health literacy principles to patient education. The analysis revealed a mean increase of 19.3 percentage points in knowledge scores and a

1.4-point gain in confidence, translating to an improvement of over 45% in self-efficacy.

This gain exceeded the project's goal of a 10% increase and was statistically significant ($p < 0.001$), confirming that the tailored, evidence-based curriculum successfully closed the identified knowledge and practice gap among participating staff.

Table 1 *Results*

Metric	Pre-Assessment Mean (n=35)	Post-Assessment Mean (n=35)	Difference	Statistical Significance (*p*)
Objective Knowledge Score (Out of 100)	72.5	91.8	+19.3	P < .001
Self-Reported Confidence (1-5 Likert Scale)	3.1	4.5	+1.4	P <.001

Impact on Organization

The impact of this project on the organization is substantial, immediately enhancing the quality of care provided at the site. By equipping 35 providers with advanced skills in health literacy and plain language communication, the clinic is now better positioned to achieve improved patient engagement, a foundational step toward better patient self-management. This increase in staff competence directly supports organizational goals related to preventive care, patient satisfaction scores, and alignment with national quality metrics for chronic disease management, potentially leading to longterm reductions in costly complications, such as cardiovascular events and readmissions.

Limitations

The limitations of this project included the use of a convenience sample drawn from a single, local primary care site, which may limit the generalizability of the findings to larger or different healthcare settings. Additionally, while the post-assessment showed a significant and immediate gain, the data did not include a long-term follow-up assessment to determine the sustainability of the knowledge and confidence gains, nor did it directly measure changes in patient outcomes, such as actual blood pressure control rates. While the immediate results are promising, these limitations mean that the true impact on sustained staff behavior and patient health requires further longitudinal study.

The Importance of the Project Beyond the Local Site

This project has importance beyond the local project site because it offers a replicable, evidencebased model for addressing a documented national public health crisis: poor hypertension control linked to systemic provider education deficiencies and patient health literacy gaps. The success in rapidly increasing staff knowledge and confidence across a multidisciplinary team validates that a focused, low-cost educational intervention is a highly effective, scalable strategy. The model can be adopted by other primary care centers, Federally Qualified Health Centers (FQHCs), and community health systems struggling to meet the American Heart Association's call for new implementation strategies to improve national blood pressure control rates, especially in diverse and underserved populations.

Conclusions

The impact of this DNP project on the project site is substantial and immediate, as evidenced by the statistically significant gain in both staff knowledge and self-reported confidence across 35 providers. The mean knowledge scores improved by over 19 percentage points, directly translating to an enhanced capacity to deliver evidence-based hypertension care using health literacy principles. This heightened competency immediately strengthens the clinic's position in meeting national quality metrics for chronic disease management and promotes a patientcentered culture, which is fundamental to long-term patient satisfaction and preventative success. Future recommendations for this organization include implementing mandatory, recurring annual refresher training based on this curriculum to ensure the sustainability and retention of knowledge gains over time. Additionally, this organization should consider integrating a "TeachBack" protocol as a required documentation field within the electronic health record (EHR) to standardize the application of health literacy techniques in every patient encounter. Future recommendations for modifications of this project are to expand the study to include a

three- or six-month post-intervention followup to measure the long-term sustainability of the staff's increased confidence and knowledge, and to correlate these staff metrics directly with objective patient outcomes, such as changes in the clinic's average patient blood pressure control rates. The potential implications of this project on nursing practice include validating the critical role of the nurse, especially the DNP-prepared nurse, as a leader in evidencebased education and system change. By closing the knowledge gap regarding health literacy, this project positions nurses to be more effective patient advocates and primary educators, directly improving the quality and safety of patient care across various settings. The real or potential impact of this project to effect positive social change, diversity, equity, and inclusion is significant because it directly addresses the documented health inequities in hypertension control. By training staff to use plain language and assess health literacy, the project helps dismantle communication barriers that disproportionately affect diverse, low-income, and rural populations, thereby promoting health equity and ensuring all patients, regardless of their background, receive understandable, actionable information necessary for successful self-management.

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