

IMPROVING HYPERTENSION FOLLOW-UP AND EDUCATION IN PRIMARY CARE:
ENHANCING NURSE AND PROVIDER PRACTICES FOR BETTER PATIENT OUTCOMES

by

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in

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DEDICATION

This work is dedicated to my beloved son, Lake, whose very presence fills my life with joy and hope. You have brought immeasurable love and meaning to my world. To my husband Lane, whose steadfast support, encouragement, love and unwavering belief in my abilities has sustained me through every challenge and triumph. I also wish to honor my entire family- for your encouragement, patience and endless support.

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CHAPTER ONE

REVIEW OF THE LITERATURE

Introduction

High blood pressure, or hypertension, remains one of the most notable modifiable risk factors for cardiovascular disease worldwide and contributes to millions of deaths annually (Peng et al., 2022). Defined as having a blood pressure reading of 140/90 at rest (American Academy of Family Physicians, 2022). Hypertension affects approximately 47% of adults in the United States (U.S.) and accounts for more than \$1.3 billion in annual medical costs (Ganetzky et al., 2023). Despite advances in the medical industry aimed at understanding and treatment of hypertension, there are still treatment and outcome disparities that exist between high-income countries and low- and middle-income countries (Edward et al., 2022). Many hypertension management approaches fall within the nursing scope of practice, including patient education, lifestyle counseling, medication management, and ongoing monitoring (Suwanno et al., 2023). This realization has allowed nurses' roles to evolve significantly in providing comprehensive and patient-centered hypertension management in primary care settings (Ganetzky et al., 2023).

Background

Hypertension typically affects approximately 77.9 million adults in the U.S., with around 81.5% being aware of their condition, but only 52.5% having controlled hypertension (Gomendi, 2023). Barriers to effective hypertension management include suboptimal clinic workflows, limited staffing, multiple competing patient concerns, and limited hypertension education (Ganetzky et al., 2023).

Even with substantial evidence supporting the effectiveness, safety, and patient-centered nature of nursing interventions for hypertension management in primary care settings, many healthcare systems continue to rely mostly on physician-led models for chronic disease care (Falco et al., 2023). Reliance on physician-only models can lead to missed opportunities for patient education, inadequate self-care support, and less comprehensive chronic disease management for patients with hypertension (Ganetzky et al., 2023). Overall quality of care associated with nursing-led interventions shows improved blood pressure control and patient satisfaction outcomes (Edward et al., 2022). There is a critical need for quality improvement initiatives that promote the use of nursing interventions for hypertension management in primary care. Nursing interventions in primary care, when used appropriately, can optimize blood pressure control, enhance patient self-care behaviors, and ensure more comprehensive chronic disease management (Gomendi, 2023).

The planned quality improvement initiative is to implement nursing interventions of education and regular follow-up care for patients, following an initial provider visit with a diagnosis of hypertension. The scoping review will be used to identify current evidence regarding interventions used for hypertension management in primary care, examine the effectiveness of these interventions, identify barriers, and evaluate current evidence to inform future research directions.

Methods

The review protocol was established before data extraction to ensure the proper sequence was followed. The sequence can be seen below and in Figure 1.

Eligibility Criteria

Inclusion criteria: Studies were included if: (1) examined nursing interventions for hypertension management, (2) were conducted in primary care settings, (3) included adult (>18 years old) participants with hypertension, (4) measured blood pressure, and other related outcomes such as heart attack and stroke rates or quality of life metrics, and (5) provided evidence regarding intervention effectiveness or implementation. Any geographical location, and English or English-translated papers were considered.

Exclusion Criteria: Studies were excluded if they: (1) did not involve nursing interventions as a primary or significant component, (2) occurred more than 10 years ago, or (3) included pregnant women within the study.

Information Sources

CINAHL database was used to find nursing-specific topics. The Montana State University library was also used to identify additional sources on hypertension in primary care clinics. Google was the last source used to find well-established and educational sources that could not be found through other searches.

Search. A comprehensive analysis was conducted to identify studies that met the inclusion criteria. Keywords include: “hypertension” OR “high blood pressure” OR “elevated blood pressure” OR HTN OR hypertensive; AND “primary care” OR “primary health care” OR “primary healthcare”; AND nurse OR nurses OR nursing. All studies that addressed nursing interventions for hypertension management in primary care settings were included to ensure comprehensive coverage of available evidence.

Results

Figure 1 shows the search yielded 870 articles related to nurse interventions for hypertension management, along with two articles found through a manual search of the Montana State University Library and four articles found through online searches. Articles older than 10 years were removed ($n = 428$), 442 articles underwent additional screening, and five articles proceeded to full-text review. All five screened articles and the six articles identified through the manual Google search were included in this scoping review, totaling 11 articles.

All eleven studies focused on nursing interventions for hypertension management in primary care settings were reviewed for relevance. Each study was assessed against the inclusion and exclusion criteria, with all eleven studies meeting the criteria for inclusion in the review.

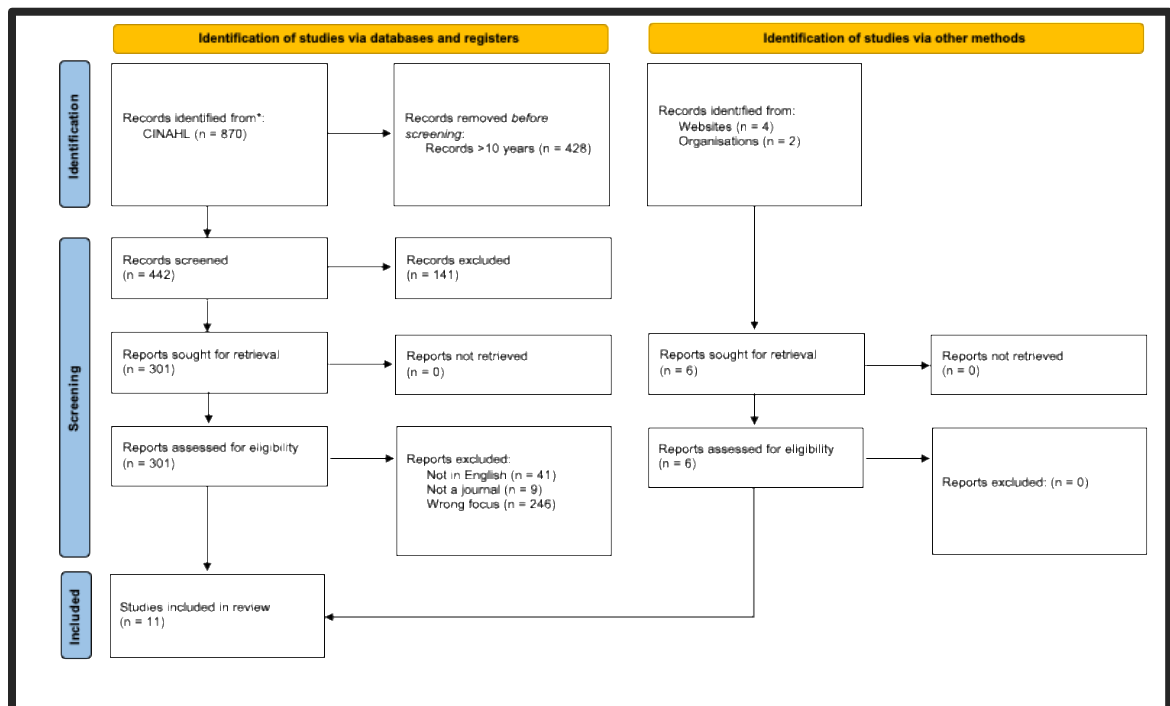


Figure 1. PRISMA diagram of articles included in scoping review

Characteristics of Sources of Evidence

The included studies encompassed multiple research methods: systematic review with meta-analysis (n=1), cross-sectional studies (n=3), intervention studies (n=2), quality improvement projects (n=3), practice model descriptions (n=1), and experience reports (n=1). The diversity in methods strengthened the comprehensive evidence base and provided multiple perspectives on intervention effectiveness.

All studies were conducted in primary care settings including community health centers (n=2), primary health care centers (n=8), and rural clinics (n=2). Sample sizes ranged from small quality improvement projects (n=50) to large national surveys (n=145,000), representing diverse populations across urban and rural settings with varying resources and economic statuses.

The studies were published between 2017 and 2024, with the majority (n=8) published in the last three years, representing current evidence and practices in nursing interventions for hypertension management. This timeframe ensures that results reflect current healthcare delivery models, practice standards, and patient populations.

Nurse Educational Interventions. Falcão and colleagues conducted a comprehensive systematic review and meta-analysis examining the effectiveness of nurse-delivered educational interventions for blood pressure control (Martins Falcão et al., 2023). The meta-analysis found that in-person educational interventions led to substantial reductions in blood pressure, with a systolic decrease of -12.41 mmHg and a diastolic decrease of -5.40 mmHg (Martins Falcão et al., 2023).

Complementing these findings, Suwanno and colleagues conducted a large cross-sectional study in Thailand to determine how the education level of the nurse relates to hypertension self-care outcomes (Suwanno et al., 2023). By examining 1,493 participants across

15 primary care facilities, they found that patients cared for by post-baccalaureate nurses achieved significantly better hypertension self-care outcomes (Suwanno et al., 2023).

Edward and colleagues further explored nurse education by assessing the impact of short instructional videos on healthcare provider competencies in hypertension management in Tanzania (Edward et al., 2022). Adherence to the recommended time between blood pressure readings increased from 28.1% to 72.7%, knowledge of blood pressure thresholds for patients with complications improved from 21.2% to 97.0%, and knowledge of lifestyle counseling improved from 36.4% to 97.0% (Edward et al., 2022).

Quester and colleagues evaluated a comprehensive staff training intervention targeting hypertension management in Swedish primary care centers (Quester et al., 2024). Their two-year study found that while the intervention did not result in a significant improvement in overall blood pressure control rates, LDL-cholesterol control rates improved ($p=0.043$), and the accuracy of BP measurement was seen ($p<0.001$) (Quester et al., 2024).

Educational interventions for patients that combined individual counseling with group activities achieved the most significant results. This evidence shows that nurse-delivered education represents a critical factor in intervention effectiveness and patient outcomes. Higher-educated nurses, post-baccalaureate specialty or graduate nursing programs, were associated with better patient outcomes across all aspects of self-care, including maintenance, management, and confidence (Suwanno et al., 2023). This highlights the need to strengthen education for future nurses before they enter the workforce and to provide ongoing education for nurses already in practice.

Team-Based Care Models. Ganetzky and colleagues described two successful team-based models for hypertension management implemented in academic primary care settings (Ganetzky

et al., 2023). The first model featured a nurse practitioner-led blood pressure clinic. This model utilizes the nurse practitioner's expertise and improved workflow by offering shorter, hypertension-specific appointments. Patients are referred to this clinic by an electronic health record system based on elevated blood pressure or need for follow-up. The clinic also provided patients with support and resources to address health factors influenced by social issues such as food insecurity and transportation barriers, recognizing that dietary choices play an important role in hypertension management. This model successfully increased hypertension control rates from 15% to 58% over 12 months (Ganetzky et al., 2023).

The second model operates in primary care settings without the resources for a nurse practitioner clinic, instead employing registered nurses (RNs). These protocol-driven RN visits focus on measurement verification, medication review, and frequent follow-ups every two to three weeks. This protocol enables strict blood pressure control through close monitoring and timely medication titration, in collaboration with primary care clinicians. Communication between RNs and clinicians were done in a timely manner to ensure medication changes were quickly conveyed to patients. This protocol-driven RN model achieved 86% hypertension control rates among participants (Ganetzky et al., 2023).

Both models demonstrated the effectiveness of using nursing expertise within structured team-based approaches. Important factors common to both methods included clear communication of roles, standardized protocols, integration with existing clinical workflows, and frequent, focused patient visits.

Quality Improvement Initiatives. Three quality improvement studies examined the real-world implementation of nursing and medical assistant interventions for hypertension management (Udayakumar, 2022; Gomendi, 2023; Thomas & Cassells, 2017). Udayakumar

implemented a health coaching intervention in a rural Montana primary care clinic, focusing on nurse-delivered coaching for hypertension management (Udayakumar, 2022). RNs and medical assistants who received specialized training delivered health coaching sessions. The intervention consisted of four 30-minute sessions across five weeks. Each session focused on hypertension basics, self-management skills, lifestyle changes, nutrition, physical activity, stress management, and personalized action plans. The quality improvement project demonstrated positive patient outcomes, including improved medication adherence, increased patient engagement in self-monitoring, and enhanced provider-patient communication.

A comprehensive quality initiative was developed and implemented to improve blood pressure screening, management, and control in a Montana family practice clinic (Gomendi, 2023). The changes were guided by the Knowledge to Action model, which helped develop interventions, including improved blood pressure measurement protocols, patient education materials, and team-based care approaches. All patients with BP $\geq 140/90$ mm Hg were re-screened at the end of their visit. Patients with high readings received an informational packet including educational material, home BP measurement instructions, and a BP log. Patients were instructed to either measure their BP at home or return for a recheck within 7–14 days. Patients with three elevated readings on separate visits were referred to their care team for further management. Not all project goals were achieved, but the initiative achieved a 4% improvement in hypertension control rates. The study also provided valuable insights into implementation barriers, including time constraints, patient engagement challenges, and provider readiness to increase medication therapy complexity.

Thomas and Cassells implemented a quality improvement study focused on managing elevated blood pressure by identifying and controlling it through staff training, patient education,

and the implementation of automated measurement devices (Thomas & Cassells, 2017).

BpTRU™ is an automatic BP measurement device regularly used in medical offices. The intervention involved educating and training medical assistants on correct blood pressure measurement techniques. Techniques included hands-on training with the BpTRU™ automated device and didactic sessions based on evidence-based toolkits. Adoption of the BpTRU™ device allowed for more accurate, standardized office BP measurements. Patient education was implemented regarding elevated BP, lifestyle modification, risks, and self-management. Patients with newly detected elevated BP received a handout and were invited to a lifestyle program, and follow-up was conducted after 6–12 weeks to reassess BP outcomes. The study demonstrated improvements in blood pressure measurement accuracy and consistency. The automated BpTRU™ device helped reduce measurement variability and improve diagnostic accuracy.

These quality improvement interventions are all aimed at improving identification, education, and follow-up in hypertension management. Common to each study was the use of workflow redesign, team-based care, technology integration, and structured patient-provider education to improve blood pressure control and hypertension management in primary care settings.

Technology-Enhanced Interventions. Oliveira and colleagues reported on the development and implementation of participatory software designed to enhance the quality of nursing care for patients with hypertension in Brazilian Primary Health Care settings (Oliveira et al., 2024). The software implementation focused on standardizing nursing protocols, improving documentation quality, and enhancing care. Specific outcome measures were not provided, but the report highlighted the potential for technology solutions to support nursing interventions and improve standardized care across providers and settings.

Cross-National Practice Variation. Peng and colleagues conducted a large-scale cross-sectional analysis of follow-up management services and health outcomes among hypertensive patients in Jiangsu Province, China (Peng et al., 2022). The study revealed significant associations between follow-up visit frequency, visit quality, and blood pressure control outcomes. Patients receiving more frequent, comprehensive follow-up visits with well-trained nurses had better blood pressure control and medication adherence. The study emphasized the importance of systematic follow-up protocols and the critical role of nursing professionals in delivering consistent, high-quality care.

Measurement Standardization. Hellgren and colleagues conducted a comprehensive survey of hypertension management practices across eight Swedish regions, including 76 primary health care centers (Hellgren et al., 2023). Only 13% of centers routinely measured standing blood pressure, and 33% of centers never used home blood pressure measurements. This indicates the opportunities and importance for nursing-led practice standardization. The survey identified significant staffing shortages and inadequate resource allocation, with patient loads per provider varying widely from center to center. These findings highlight the importance of addressing organizational and resource factors when implementing standardized nursing interventions for hypertension management.

Synthesis of Results

The evidence synthesis revealed several distinct categories of nursing interventions with demonstrated effectiveness: educational interventions, team-based care models, provider training programs, quality improvement approaches, and technology-enhanced interventions.

Structured nurse-delivered educational interventions showed the strongest evidence for blood pressure reduction, with effect sizes ranging from 5.40 to 12.41 mmHg reduction.

Combination approaches with both individual and group education components achieved the most significant effects (Martins Falcão et al., 2023).

Nursing-integrated team approaches demonstrated substantial improvements in hypertension control, with some models achieving 86% control. Key factors included clearly defined roles, standardized protocols, and dedicated time allocation for hypertension management (Ganetzky et al., 2023). Short, targeted training interventions significantly improved provider competencies and adherence to clinical guidelines. This was especially true in settings with limited nurse resources. Video-based training showed potential for easy widespread implementation (Edward et al., 2022).

Systematic quality improvement initiatives achieved modest improvements of 2-4% in blood pressure control. These studies provided valuable insights into implementation challenges and organizational factors (Udayakumar, 2022; Gomendi, 2023). Digital solutions and automated measurement tools showed promise for standardizing care delivery and improving measurement accuracy (Thomas & Cassells, 2017).

Key Success Factors

Higher nurse education levels significantly influenced intervention effectiveness, with graduate-prepared nurses achieving better patient outcomes than those with lower levels of education (Suwanno et al., 2023). Adequate training and competency development were essential for all intervention types.

Strong leadership support, adequate resources, and integration with existing clinical workflows were essential to the intervention's success. Organizations with supportive environments and quality improvement orientations achieved better outcomes (Gomendi, 2023). Multicomponent interventions that combined education, monitoring, and care coordination

showed more significant benefits than single-component approaches (Martins Falcão et al., 2023). Interventions that actively engaged patients in self-care and self-monitoring had better outcomes than those focused solely on provider-level changes (Peng et al., 2022).

Implementation Barriers and Challenges

Limited staffing, inadequate funding, and competing clinical priorities made the implementation of interventions difficult across multiple settings (Gomendi, 2023). Resistance to change, established practice patterns, and lack of standardization created implementation challenges, particularly in complex healthcare systems (Quester et al. 2024). Inadequate training, poorly defined roles, and limited authority for independent nursing practice reduced the effectiveness of interventions in some settings (Edward et al., 2022). Poor communication and care delivery, inadequate information systems, and a lack of incentives created difficulties with sustained implementation (Peng et al., 2022).

Geographic and Cultural Considerations

Interventions in resource-constrained settings (Tanzania) achieved significant improvements with relatively simple, low-cost approaches. In contrast, high-resource settings (Sweden, USA) faced different challenges related to system complexity and organizational size (Edward et al., 2022). Different healthcare delivery models influenced intervention design and effectiveness, with centralized systems showing different implementation patterns compared to market-based systems (Peng et al., 2022). Patient engagement strategies and educational material required some changes to be effective in different cultural settings. This was especially evident in regards to various health beliefs and care-seeking behaviors (Peng et al., 2022).

Discussion

The nursing-led intervention model improves various aspects of hypertension management and significantly improves patient outcomes (Falco et al., 2023). Educational interventions delivered by nurses have been shown to result in significant reductions in blood pressure, with systolic values decreasing by approximately 12 mmHg and diastolic values by more than five mmHg (Falco et al., 2023). Team-based care models that integrate nursing expertise achieve substantial improvements in hypertension control rates, with some programs reaching well-controlled rates above 80% (Udayakumar, 2022). Higher rates of medication adherence and self-care behaviors are observed among patients who receive nursing interventions, such as education (Peng et al., 2022).

The effectiveness of nursing interventions also extends to healthcare system outcomes (Gomendi, 2023). Implementation of nursing interventions is associated with more efficient resource utilization, reduced healthcare costs, and improved quality of care (Thomas & Cassells, 2017). Healthcare systems that implement nursing interventions for hypertension management achieve better performance on quality metrics and overall patient satisfaction (Quester et al., 2024). Systematic implementation of nursing interventions was associated with improved care coordination, enhanced patient engagement, and better health outcomes (Peng et al., 2022). Importantly, nursing interventions complement- rather than replace- physician care, creating collaborative models that optimize both clinical expertise and patient support (Ganetzky et al., 2023).

Summary of Evidence

This scoping review demonstrates that nursing interventions can significantly improve hypertension management in primary care settings. Across eleven studies, interventions were effective across different healthcare systems and patient populations. The evidence showed educational interventions and team-based care models were the most effective.

Educational interventions delivered by nurses achieved clinically significant reductions in blood pressure, with the largest meta-analysis showing reductions of over 12 mmHg systolic and five mmHg diastolic pressure (Martins Falcão et al., 2023). Team-based care models integrating nursing expertise achieved substantial improvements in hypertension control rates, in some cases exceeding 80% (Ganetzky et al., 2023). Notably, the review demonstrates that intervention effectiveness is influenced by nurse education levels, with higher levels of training linked with achieving better patient outcomes (Suwanno et al., 2023). These findings highlight the importance of nurse education and professional development in shaping effective hypertension care.

Clinical and Practice Implications

Healthcare organizations should prioritize implementing nurse-driven educational interventions and team-based care models, as these approaches have the strongest evidence of clinical effectiveness. Educational interventions should combine individual and group components to maximize impact (Martins Falcão et al., 2023). Investing in furthering nurse education and development is essential for optimizing the effectiveness of interventions. Organizations should prioritize hiring and retaining highly educated nurses while providing ongoing development for all nursing staff (Suwanno et al., 2023). Nursing interventions should be embedded within quality improvement frameworks that address organizational barriers and

promote sustainable change. Regular monitoring and feedback systems are crucial for maintaining the accuracy of interventions (Udayakumar, 2022; Gomendi, 2023).

Healthcare systems should consider investing in technology solutions that support nursing interventions, such as automated measurement devices, decision-support tools, and patient engagement platforms (Thomas & Cassells, 2017).

Policy and System Implications

Healthcare policies should support expanded nursing roles in chronic disease management while ensuring adequate education and training requirements. Clear regulations regarding nursing authority for medication management and care coordination are needed (Quester et al. 2024). Healthcare quality measurement systems should include process and outcome measures that capture nursing contributions to hypertension care. Current quality metrics may underemphasize nursing interventions by focusing primarily on physician-delivered care (Peng et al., 2022).

Healthcare payment models should appropriately reimburse nursing interventions for hypertension management. Value-based payment approaches may support team-based nursing interventions (Gomendi, 2023). Healthcare systems should invest in a framework to support nursing interventions, including information technology systems, quality improvement capabilities, and interprofessional collaboration tools (Hellgren et al., 2023).

Limitations

Several limitations should be considered in interpreting these findings. The first limitation to consider is that the review was based on a selected collection of studies rather than a comprehensive database search, thereby limiting the evidence. The second limitation is that the relatively short follow-up periods in many studies limit understanding of the long-term

effectiveness and sustainability of interventions. The final limitation is that publication bias cannot be ruled out, as studies demonstrating positive effects are more likely to be included than those with negative results. Despite these limitations, the findings provide valuable insights that can guide future research and practice in regards to hypertension.

Conclusion

This scoping review provides substantial evidence that nursing interventions can significantly improve hypertension management in primary care settings through multiple practical approaches. Team-based care models that integrate nursing knowledge can achieve hypertension control rates exceeding 80%, substantially improving upon traditional physician-only approaches (Ganetzky et al., 2023). Despite this evidence, the underutilization of nursing expertise in hypertension management continues across many healthcare settings (Peng et al., 2022). Healthcare organizations should take action to strengthen nursing roles, support interprofessional collaboration, and ensure that every patient with hypertension has access to evidence-based nursing interventions (Ganetzky et al., 2023).

Future research should focus on comparative effectiveness studies, implementation science investigations, economic evaluations, and long-term outcome assessment to further strengthen the evidence base and support the widespread adoption of effective nursing interventions for hypertension management.

CHAPTER TWO

QUALITY IMPROVEMENT PROPOSAL

Introduction

The burden of hypertension is one of the most significant public health challenges of the 21st century, with widespread implications for healthcare systems worldwide (World Health Organization, 2025). The World Health Organization's 2025 Global Hypertension Report estimates that hypertension affects 1.4 billion adults aged 30-79 worldwide (WHO, 2025). Despite being both preventable and treatable, hypertension remains poorly controlled, as only 21% of people with hypertension have their condition adequately managed (WHO, 2025). Current guidelines suggest that blood pressure readings over 140/90 are considered hypertensive (American Academy of Family Physicians, 2022). Health care interventions in the United States have not kept pace with the rising demand for hypertension control; only about one-fifth (20.7%) of adults with hypertension achieve blood pressure control below 130/80 mmHg (Fryar et al., 2024). Montana-specific data reveals unique challenges and opportunities for hypertension management within the state's healthcare landscape. According to the Montana Department of Public Health and Human Services, approximately 29.5% of Montana adults have hypertension, which represents a significant burden given the state's rural geography and healthcare access challenges (MDPHHS, 2022; MDPHHS, 2021). These statistics highlight both the opportunity for improvement and the potential impact that well-designed nursing intervention programs could achieve.

Problem and Aim Statement

The primary problem identified through the literature review is the underutilization of evidence-based nursing interventions for hypertension management in primary care settings, resulting in suboptimal blood pressure control rates and missed opportunities for comprehensive patient education and follow-up care (Ganetzky et al., 2023; Gomendi, 2023). Many primary care practices lack standardized protocols for nursing-led hypertension interventions, leading to inconsistent care delivery and suboptimal patient outcomes (Hellgren et al., 2023; Thomas & Cassells, 2017). The question guiding this quality improvement project is: "Can the implementation of structured nursing interventions, including patient education and regular follow-up care, improve hypertension management outcomes in primary care settings?"

This quality improvement project aims to implement a comprehensive nursing intervention program that includes structured patient education, regular follow-up visits, and enhanced documentation protocols to improve hypertension control and patient self-management behaviors. This approach is based on evidence from the literature review indicating that multicomponent interventions combining education, monitoring, and care coordination achieve superior outcomes compared to single-component approaches (Martins Falcão et al., 2023; Udayakumar, 2022; Quester et al., 2024).

Context

The literature review revealed significant variation in hypertension management practices across different healthcare settings, with many primary care centers lacking standardized protocols for nursing-led interventions (Suwanno et al., 2024; Hellgren et al., 2023). In Swedish

primary care centers, only 13% routinely measured standing blood pressure, and 33% never utilized home blood pressure measurements, indicating substantial opportunities for practice standardization (Hellgren et al., 2023). Similar variations exist in staffing and resource allocation, with patient loads per provider varying dramatically across different settings (Hellgren et al., 2023). These factors highlight the importance of assessing site-specific needs and existing workflows before implementing nursing interventions.

The target setting for this quality improvement project is a family medicine clinic in Montana that provides care to adult patients with hypertension. This clinic was selected after an assessment was completed of its existing hypertension management practices, available nursing resources, documentation practices, and patient population. Key stakeholders will include four primary care providers, five registered nurses, two medical assistants, clinic administrators, and patients with hypertension. On average, about 48 patients ages 18-85 are seen each day by providers in this clinic. The interdisciplinary team approach is essential, as the literature demonstrates that successful interventions require clear role definition, standardized protocols, and effective communication among all team members (Ganetzky et al., 2023; Udayakumar, 2022).

Site-specific data collection includes current nursing intervention utilization, patient education practices, follow-up care protocols, and baseline hypertension control rates. Current nursing interventions include home blood pressure logging and log review, and validation of home blood pressure cuffs by comparing patient devices to automatic office machines. Current patient education is limited, with most of the focus on reviewing home blood pressure readings and correcting medication use. Established follow-up protocols include nurse visits as needed

and visits with a provider every six weeks during initiation or adjustment of antihypertensive medications.

The national benchmark shows that only 52.5% of adults with hypertension have controlled blood pressure (Gomendi, 2023), this can be used as a comparison for the following data collected for this quality improvement project. The table below summarizes the hypertension control rates among adult patients at a family medicine clinic in Montana for four providers. For each provider, the percentage of patients with diagnosed hypertension who achieved blood pressure control (defined as less than 140/90 mmHg) is presented. To protect confidentiality, individual provider names are not disclosed. The data reflect performance for the most recent quarter (Q3), with an overall average control rate of 65% across all four providers.

Table 1. Provider Hypertension Control Rates

Provider	Hypertension Control Rate (%)
Provider 1	63
Provider 2	67
Provider 3	74
Provider 4	56

(Hypertension Control Rates, Q3 2025, clinic data, personal communication)

SMARTIE Goals

SMARTIE goals are defined as being Specific, Measurable, Achievable, Relevant, Time-bound, Inclusive, and Equitable (SMARTIE).

SMARTIE Goal #1: 100% of patients receive hypertension education packet at nurse visit

This goal centers on ensuring that 100% of patients attending nurse hypertension follow-up visits receive the standardized educational packet throughout the entire eight-week implementation. The packet covers hypertension management, home blood pressure monitoring, and lifestyle and dietary recommendations (see Appendix A for education materials). Nursing staff will collect data on packet distribution at each visit and promptly record it in a designated field within the electronic health record (EHR). As project coordinator, weekly audits of documentation will be performed to verify both completeness and accuracy, with immediate feedback provided to staff if gaps are identified. The evaluation will include descriptive statistics summarizing overall and weekly distribution rates and will be visualized using run charts to identify trends and quickly address any lapses in reliability. This structured approach directly supports the project's specific aims and enables ongoing quality monitoring throughout the intervention.

SMARTIE Goal #2: Achieve 90% nurse adherence to documentation protocols

This goal aims to ensure that 90% of nurses adhere to proper documentation protocols (see Appendix B for protocol details) during hypertension follow-up visits. Documentation completion and accuracy will be tracked through EHR audits conducted weekly by the project coordinator. Missing or incomplete documentation will be addressed promptly with nursing staff through feedback and retraining as needed. Data analysis will involve calculating weekly adherence rates and visualizing them using run charts to monitor trends over the eight-week intervention.

SMARTIE Goal #3: Improve hypertension control rates by 5-10% within 8 weeks

The final goal is to increase hypertension control rates (blood pressure under 140/90) among adult patients in the clinic. Blood pressure measurements will be collected during nurse and provider visits and documented in the EHR by clinical staff. As project coordinator, data will be extracted weekly to monitor control rates and identify trends. The data will be analyzed using chi-square tests to compare baseline and post-intervention control percentages and run charts will be used to track progress weekly. Results from the four-week midpoint assessment will guide any necessary adjustments to clinical protocols or follow-up procedures to optimize patient outcomes.

Quality Improvement Model

This quality improvement project will utilize the Plan-Do-Study-Act (PDSA) Model for Improvement from the Institute for Healthcare Improvement (IHI) Quality Improvement Essentials Toolkit (IHI, 2023). The PDSA model is appropriate for this nursing intervention project as it supports testing changes, enables rapid-cycle improvements, and emphasizes learning through small-scale pilots before full implementation. The PDSA framework will guide this project through four distinct phases:

Plan Phase: The planning phase involved developing nurse intervention protocols and patient education materials; all education documents are included in Appendix A. Follow-up schedules were established in alignment with provider goals, and outcome measures were defined. During this phase, the site's overall workflow was evaluated to identify potential improvements. Outcome measures included improved blood pressure readings during nurse visits and subsequent provider follow-up, and successful documentation for nurses and providers.

Do Phase: Implementation of the eight-week quality improvement project will begin with education sessions for nurses and providers on the educational packet (included in Appendix A)

and on standardized documentation procedures. Providers will then schedule adult hypertension patients for a dedicated follow-up visit with nursing staff 1-2 weeks after their initial appointment. During these nurse visits, educational packets will be distributed, and documentation will be completed in accordance with established protocols. The project will include an in-depth assessment at the four-week mark to evaluate early effectiveness and allow for adjustments to workflow or procedures as needed. Throughout the eight-week intervention, the team will focus on structured patient education, follow-up visits, and enhanced documentation processes to support sustainability and quality patient care. This approach is designed to ensure reliable implementation and timely feedback throughout the project period.

Study Phase: Data collection and analysis will focus on process measures (completion of education sessions, adherence to follow-up protocols) and outcome measures (blood pressure control rates). The literature emphasizes the importance of both quantitative measures and qualitative feedback from patients and staff (Udayakumar, 2022; Quester et al., 2024).

Act Phase: Based on study results, interventions will be modified, standardized, and scaled up for broader implementation. Successful elements will be retained, while problematic components will be refined based on evidence and stakeholder feedback.

Methods

Implementation Summary

The planned intervention will be implemented over eight weeks at a family medicine clinic in Montana, focusing on adults with hypertension. The project emphasizes staff and patient education improvements, including scheduled nursing follow-up visits, use of standardized educational packets (see Appendix A), and improved documentation practices (see Appendix B).

The intervention includes provider and nurse education, patient education delivery, and enhanced guideline adherence, with a midpoint assessment at four weeks to evaluate progress. The primary aim is to improve hypertension control rates and promote long-term health outcomes.

Intervention and Implementation

This quality improvement project will implement a comprehensive nursing intervention program in a primary care setting in Montana, targeting adult patients with hypertension through structured education sessions, follow-up visits, and adherence to documentation protocols. The intervention will be delivered by trained registered nurses over an eight-week period, with the goal of improving blood pressure control rates through evidence-based nursing practices identified in the literature review.

Structured patient education program

Drawing on evidence that nurse-driven educational interventions can achieve blood pressure reductions of 12.41 mmHg systolic and 5.40 mmHg diastolic (Martins Falcão et al., 2023), this component will include standardized individual education sessions covering hypertension, lifestyle modifications, and self-monitoring techniques.

Each patient with uncontrolled hypertension will be scheduled for a follow-up visit to participate in a one-on-one, standardized 20-minute session with a registered nurse. These visits will include thorough coverage of hypertension basics, the importance of medication adherence, and strategies for incorporating lifestyle changes such as improved nutrition, increased physical activity, and effective stress management. The educational packet also guides patients in self-monitoring techniques, including training on proper home blood pressure measurement and log tracking, which supports ongoing self-assessment and engagement.

To further enhance understanding and retention, patients will receive evidence-based educational materials, such as instructional handouts and blood pressure logs. Each education session is tailored to meet the unique needs of participants, with flexible scheduling and the opportunity to ask personalized questions and follow up. The program is integrated with the broader quality improvement initiative, ensuring that patients receive consistent, multidisciplinary care and ongoing encouragement to achieve better blood pressure control and long-term health outcomes.

Follow-up Care

Based on evidence from team-based care models that achieved 86% hypertension control rates (Ganetzky et al., 2023), this component will include structured nursing visits.

The follow-up care component of this project ensures that patients with poorly controlled hypertension receive structured visits every 4-6 weeks, allowing for consistent monitoring and timely intervention. During these follow-up visits, blood pressure is verified using standardized protocols and automated office blood pressure machines to minimize measurement errors and enhance reliability. Nurses will assess medication adherence at each visit by patients' self-reporting, offering individualized support and strategies to address barriers and improve consistency in medication use and overall lifestyle management. Project metrics that track follow-up appointment scheduling and completion will be reported.

Enhanced Documentation and Care Coordination

A key feature of this approach is the establishment of clear documentation protocols for nursing staff, which enables prompt adjustment of care plans when clinically indicated and tracking of provider hypertension control rates. Specific details about the documentation protocol

can be found in Appendix B. All nursing assessments and interventions will be communicated to providers and thoroughly documented in the electronic health record. Existing standardized documentation templates will be updated to integrate the nursing-led hypertension interventions, ensuring consistency and completeness. The update will include tracking of education provided during the nurse visits and more consistent blood pressure logs.

Patients will be encouraged and supported to track their self-monitoring values using patient portals and blood pressure logs, allowing them and their care teams to maintain up-to-date information on progress and challenges. Key quality metrics will be consistently monitored and reported, including documentation compliance rates.

Budget Estimate

The packets are printed in-house, and the printing cost is estimated at \$0.20 per page. For 50 packets with 13 pages each, the printing cost is \$130. The staff training session, assuming five nurses attend a 30-minute session at an average hourly wage of \$35, is an estimated cost of \$87.50. This does not include the time donated by the project coordinator to the clinic, which will be an estimated 270 hours of work at \$35 an hour. This will save the clinic approximately \$9,450.

Table 2. Estimated Total Project Budget

Budget Item	Quantity/Duration	Unit Cost	Total Cost
Printing 13-page packets	50 packets	\$0.20 per page	\$130.00
Staff Training	5 nurses, 30 minutes	\$35/hour x 0.5 hour	\$87.50
Total Estimated Cost			\$217.50

Implementation Timeline

Figure 2 shows the proposed timeline for project implementation. This includes planning the project, implementing the changes and then evaluating outcomes after completion.

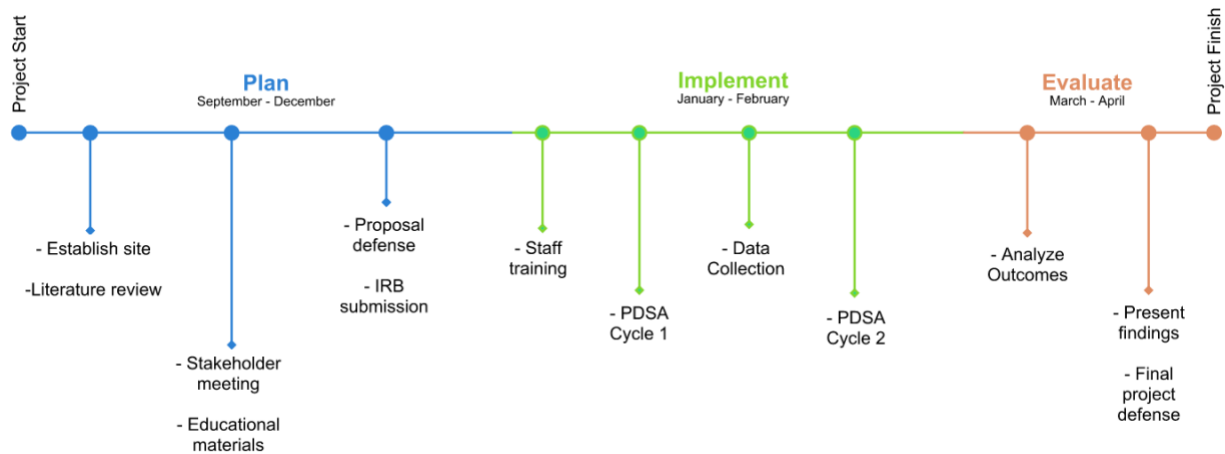


Figure 2. Project Timeline

Anticipated Barriers and Solutions

Several anticipated barriers to implementing this quality improvement project will be proactively addressed through tailored solutions to ensure project success and sustainability. To address time constraints that may limit patient and staff participation, the plan includes streamlined care protocols to reduce workflow burdens. Staff resistance to change is expected and will be managed through training, clear role definitions, and ongoing support aimed at building confidence and buy-in among clinical team members. Resource limitations will be mitigated by leveraging existing staff and aligning the new interventions with current clinic workflows, thereby avoiding the need for additional personnel or significant new investments. Because nurse visits are typically covered by insurance, remaining patient engagement barriers

will be addressed through development of targeted educational materials and flexible session scheduling to accommodate varying patient needs and preferences (Peng et al., 2022).

Evaluation and Analysis

The evaluation plan directly aligns with the SMARTIE goals and follows evidence-based approaches identified in the literature review. Data collection will occur through multiple methods to ensure comprehensive assessment of both process and outcome measures.

Table 3. SMARTIE Goal #1		
Ensure that 100% of patients seen for nurse hypertension visits will receive an educational packet from the nurses. The packet will include materials about hypertension management, instructions for home blood pressure monitoring, and recommended lifestyle and dietary improvements.		
○ Prepare standardized educational packets covering hypertension, home BP monitoring, and lifestyle/diet changes. ○ Train nurses on consistent distribution of packets and documentation of completed nurse visit. ○ Integrate checklist into EHR for tracking packet distribution. ○ Conduct weekly audits to ensure 100% distribution rate is being met.		
Data to be collected	Collection Process	Planned data analysis
Numerator: Number of patients receiving the educational packet at nurse hypertension visits. Denominator: Total number of patients seen for nurse hypertension follow-up during the project period.	At each qualifying nurse follow-up visit, the nurse documents educational packet delivery in a dedicated EHR field. Office manager and project manager extract and review this data weekly to track compliance and identify any missed distributions. Data is securely stored and monitored through the EHR system and in a centralized project log for audit purposes.	Calculate and monitor the weekly and cumulative percentage of eligible patients who receive the packet. Perform real-time run chart analysis to ensure immediate detection of gaps. If distribution falls below 100% in any week, conduct root cause analysis and immediate corrective action.

Table 4. SMARTIE Goal #2		
Ensure 90% adherence to proper documentation protocols by nurses during hypertension follow-up visits over the 8-week intervention period.		
○ Train nursing staff on standardized documentation protocols. ○ Regular audits of nurse documentation for completeness and accuracy. ○ Provide timely feedback and additional training if adherence falls below target. ○ Utilize EHR checklists to support protocol adherence. ○ Maintain audit tracking logs for ongoing monitoring.		
Data to be collected	Collection Process	Planned data analysis
Numerator: Number of nurse follow-up visits documented correctly per protocol. Number of nurse follow-up visits scheduled. Number of nurse follow-up visits completed. Denominator: Total number of nurse hypertension follow-up visits during intervention. Total number of nurse hypertension visits. Total number of follow-up visits scheduled.	Weekly monitoring of EHR documentation records by project coordinator. Documentation review performed using a standardized audit tool. Direct communication with nursing staff regarding any identified documentation issues. Data stored securely within project files for analysis.	Calculation of weekly documentation adherence percentages. Run charts to visualize week-to-week changes. Identification of trends or gaps for targeted quality improvement interventions.

Table 5. SMARTIE Goal #3		
Increase hypertension control rates (blood pressure <140/90 mmHg) among participating patients by 5-10% within 8 weeks of implementing the intervention.		
○ Implement nurse visits focused on BP management. ○ Ensure standardized BP measurement at each visit. ○ Promptly escalate care for persistently elevated BP. ○ Facilitate frequent follow-up visits. ○ Use provider-nurse communication for timely medication adjustments.		
Data to be collected	Collection Process	Planned data analysis
Numerator: Number of patients with controlled BP (<140/90 mmHg) at 8 weeks. Denominator: Total number of patients enrolled in the intervention.	BP readings accessed through EHR during scheduled nurse and provider visits. Nurses and medical assistants document values in real time. Project coordinator extracts BP data weekly using EHR reporting tools. Data stored and analyzed within practice's secure network.	Calculate and plot hypertension control rates at baseline and at 6 weeks. Use chi-square test for percent controlled BP. Run-control charts to display weekly improvements. Stratify by baseline BP group for subgroup assessment. Compare pre- and post-intervention rates to demonstrate effect size.

Data Collection Schedule

Data collection for this quality improvement project will occur at specific intervals to ensure thorough assessment of both process and outcome measures. Baseline data will be collected one month prior to the intervention's implementation to capture essential pre-intervention metrics. During the active implementation phase, process measures will be monitored weekly to enable timely identification of challenges and opportunities for improvement. Additionally, outcome measures will be assessed through monthly evaluations to track progress toward project goals. A final evaluation will be conducted at the end of the eight-week intervention timeframe to determine overall efficacy and sustainability of the results.

Data Quality Assurance

Data quality assurance in this project will be maintained through the implementation of several evidence-based strategies. Standardized data collection will be used to ensure consistency and reliability across all collection points. The site manager will conduct weekly inter-rater reliability assessments to ensure that all team members accurately collect and record data. Additionally, the project coordinator, myself, will conduct monthly data quality reviews to proactively identify and address data discrepancies and issues, thereby safeguarding the accuracy of evaluation findings.

Safety and Confidentiality

This quality improvement project is designed to enhance standard care without introducing additional patient risks beyond those associated with routine hypertension management. All interventions are within the scope of nursing practice and follow evidence-based protocols identified in the literature review (Ganetzky et al., 2023; Martins Falcão et al., 2023; Udayakumar, 2022).

Patient Safety Considerations

This project will pose no additional risk beyond the risks involved in the care the patient is already receiving. All nursing staff will undergo training in blood pressure measurement protocols and in hypertension education and management guidelines to ensure consistent, safe practice. Effective communication protocols will be established to facilitate timely notification of providers for any concerning blood pressure readings. Additionally, regular monitoring throughout the implementation phase will identify any adverse trends in patient outcomes and enable immediate corrective actions.

Data Confidentiality and Security

Data confidentiality and security will be protected through several strictly enforced protocols. All patient data will be de-identified for analysis and reporting, to maintain privacy and reduce the risk of unauthorized information sharing. Data collection will utilize existing electronic health record systems equipped with appropriate access controls. No protected health information (PHI) will be removed from the clinical site at any point. Furthermore, all data will be stored exclusively on secure, password-protected systems with limited access to only the project coordinator and clinic manager. Individual patient information will not be reported in any publications or presentations associated with this project, ensuring that privacy is consistently maintained throughout.

IRB and Approval Process

The Institutional Review Board (IRB) and approval processes for this project will follow a comprehensive protocol to ensure regulatory compliance before any patient enrollment. Montana State University IRB approval will be obtained prior to implementation, safeguarding adherence to ethical standards. The site where the intervention will be conducted does not have its own IRB; therefore, approval will be obtained through the MSU IRB. Additionally, site representative forms and stakeholder agreements will be completed to formalize site permissions and stakeholder involvement. All regulatory requirements will be thoroughly met before beginning any patient-related activities associated with the quality improvement project.

Risk Mitigation

Risk mitigation for this project consists of proactive strategies to minimize potential harm and ensure optimal patient safety. Regular safety monitoring will be conducted throughout the implementation period, with adverse events promptly tracked and reported in accordance with

established institutional protocols. Staff training will emphasize key patient safety principles underlying every intervention component. Additionally, clear escalation procedures will be established to ensure swift, effective responses to any clinical concerns that may arise during the project.

Conclusion

This quality improvement project addresses a critical gap in the use of evidence-based nursing interventions for hypertension management in primary care settings (Ganetzky et al., 2023; Gomendi, 2023; Quester et al., 2024). This primary care clinic in Montana will include registered nurses, providers, medical assistants, and clinic managers as stakeholders alongside the patients they care for. Interventions for this project include patient education, nurse follow-up visits, and improved documentation throughout the eight-week PDSA cycle. The goals are for 100% of patients to receive a hypertension education packet, for 90% of nurses to adhere to documentation protocols, and for hypertension control rates ($<140/90$) to improve by 5-10% in 8 weeks.

CHAPTER THREE

QUALITY IMPROVEMENT MANUSCRIPT

Contribution of Authors and Co-Authors

Manuscript(s) in Chapter(s) 1, 2, 3 & 4

Author: Ashlyn Martin BSN, RN, DNP-FNP Candidate

Contributions: The author contributed by assessing the clinical problem, the project conception, implementation, data collection, and manuscript drafting.

Co-Author: Rebecca Hoover PhD, MMB, BSN, RN, OCN

Contributions: Advising of author in regards to clinical problem, project development and completion, and review of entirety of QI project. Critical role in manuscript development and completed extensive editorial reviews in support of the author.

Co-Author: Marcy Hanson PhD, MN, RN

Contributions: Additional review and editing of final manuscript by offering recommendations for improving language and organization.

Manuscript Information

Ashlyn Martin BSN, RN, DNP-FNP Candidate; Co-Authors Rebecca Hoover PhD, MMB, BSN,
RN, OCN; Marcy Hanson PhD, MN, RN

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☐ Accepted by a peer-reviewed journal

☐ Published in a peer-reviewed journal

Abstract

High blood pressure, or hypertension, is marked by having an elevated blood pressure with readings consistently above 130/80 mmHg (Jones et al, 2025). This worldwide issue of hypertension affects 1.4 billion adults globally, with only approximately 21% of those adults having their hypertension controlled (WHO, 2025). Within the state of Montana, approximately 29.5% of adults have been diagnosed with hypertension (MDPHHS, 2021; MDPHHS, 2022). With a high percentage of the adult population diagnosed as hypertensive, and the limitations of healthcare within a rural state, there is an increased need for hypertension management efforts.

The Plan-Do-Study-Act (PDSA) model guided an 8-week intervention including three components: (1) patient educational packets for hypertension management, (2) coordinated nurse follow-up for assessment and counseling, and (3) standardized documentation for clinic staff to improve workflow. A coordinated nurse follow-up visit approximately two weeks after the patients initial appointment for the intervention implementation. Process measures tracked packet distribution and standardized documentation. Outcomes were assessed by comparing blood pressure changes using paired comparisons.

Thirty-five patients completed nurse follow-up visits focused on hypertension management, with 100% of the visits measuring blood pressure. Improvement was seen in 85.7% of patients' blood pressure readings with a mean systolic reduction of 9.2%. Nearly half (45.7%) of patients received educational packets, with adherence to documentation among nursing staff at 40%. This nurse-driven intervention improved hypertension management and patient understanding, poor staff documentation limited attribution. Future implications include streamlining workflows and extending visit durations to support sustainable hypertension management in primary care.

Introduction

Clinical Problem

High blood pressure, or hypertension, is a major global public health problem, affecting an estimated 1.4 billion adults worldwide, yet only one in five has adequate blood pressure control (World Health Organization, 2025; Peng et al., 2022). According to the American College of Cardiology, hypertension is defined as persistently elevated blood pressure, with readings above 130/80 mmHg (Jones et al., 2025). A hypertension diagnosis, or more specifically uncontrolled hypertension, is associated with substantial health care utilization and cost (Jones et al., 2025). In most cases, fewer than 21% of adults with hypertension reach a treatment goal of less than 130/80 mmHg (Ganetzky et al., 2023; Fryar et al., 2024). This statistic indicates that current interventions are not reaching the population at risk, and additional avenues for hypertension control should be utilized.

Despite strong evidence supporting the use of nurses in hypertension care, many primary care clinics still do not consistently employ structured, evidence-based nursing interventions for patients with hypertension (Peng et al., 2022; Ganetzky et al., 2023; Martins Falco et al., 2023). This gap in practice is associated with poor hypertension control rates and lost opportunities to provide education and timely follow-up care to hypertensive patients (Ganetzky et al., 2023; Gomendi, 2023). Surveillance data from the Department of Public Health and Human Services for Montana reports that 29.5% of Montana adults have a diagnosis of hypertension, a particularly concerning figure given the state's rural geography, workforce shortages, and barriers to timely primary care access (MDPHHS, 2021; MDPHHS, 2022). Montana's rural designation stems from 45 of the 56 counties having fewer than 6 people per square mile (MDPHHS, 2021), and every county lacking some form of healthcare service (Health Resources

and Services Administration, 2020). Given the limited number and geographic distribution of primary care providers within Montana, it is important to utilize the healthcare workforce that is present, nurses, as an essential resource for expanding access to care.

In response to these deficits, this Quality Improvement (QI) initiative focuses on the implementation of a nurse-driven hypertension program to strengthen hypertension control in a primary care clinic. The project introduced structured nurse-delivered patient education packets, scheduled follow-up care, and standardized documentation to improve workflows and hypertension control (Martins Falcão et al., 2023; Quester et al., 2024; Udayakumar, 2022).

Review of the Literature

Previously completed scoping review synthesized evidence on nurse-led hypertension interventions in primary care settings using PRISMA-ScR-guided searches of CINAHL, Montana State University Library, and Google Scholar with keywords such as 'hypertension', 'high blood pressure', 'primary care', and 'nurse OR nursing.' A total of 870 articles were identified from the search engines and manual searches. Articles published before 2016 were initially excluded (n=428). Title and abstract screening was completed on the 442 remaining articles, based on the following inclusion criteria: 1) included a nursing intervention for hypertension management in adult primary care settings, 2) provided outcome measurements related to improved blood pressure, 3) adult participants (>18 years old) with hypertension, and 4) provided intervention or implementation effectiveness. Five articles passed the screening process along with six articles found in manual search, for a total of 11 articles going to full text review. Studies encompassed systematic reviews, cross-sectional studies, interventions, QI projects, practice models, and reports.

Nurse-delivered educational interventions for patients with hypertension in primary care settings demonstrated effectiveness across multiple studies. Interventions ranged from in-person nurse led-counseling sessions with patients (Udayakumar, 2022), to educational packets for patients (Gomendi, 2023), to staff-training and patient education on general hypertension education and self-management strategies (Thomas & Cassells, 2017). In each study a reduction in patient blood pressure was seen, indicating that an educational intervention is an important component to hypertension management (Suwanno et al., 2023).

Another set of studies included interventions based on team-based care. Ganetzky and colleagues evaluated two team-based models for hypertension management in academic primary care settings. The first model was a nurse practitioner–led blood pressure clinic that offered shorter, hypertension-focused visits for patients flagged in the electronic health record with elevated readings or follow-up needs and provided tailored education and social-support resources, increasing hypertension control from 15% to 58% over 12 months (Ganetzky et al., 2023). The second model used protocol-driven registered nurse visit every 2–3 weeks to verify measurements, review medications, and coordinate timely titration with primary care clinicians, achieving hypertension control in 86% of participating patients (Ganetzky et al., 2023). The models demonstrate the effectiveness of nursing supported interventions for hypertension management in both the advanced practice and registered nursing roles.

Evidence from the Thomas and Cassells QI project shows that introducing standardized measurement process and documentation improved the accuracy and consistency of in-office blood pressure measurement by reducing variability in recorded values (Thomas & Cassells, 2017). Collectively, the scoping review revealed that a multipronged approach is the most effective way to help patients improve their hypertension management. To this point, the QI

project included supported elements such as nurse-driven education, standardized documentation and consistent follow-up visits.

Conceptual Framework

This QI project used the Plan–Do–Study–Act (PDSA) Model for Improvement from the Institute for Healthcare Improvement Quality Improvement Essentials Toolkit (IHI, 2023). The PDSA model has been shown to be beneficial for QI projects by allowing for a cyclical nature where feedback can be incorporated, and improvements can be made throughout the course of the project.

Plan Phase. During planning, nurse-driven intervention protocols and patient education materials were developed (see Appendix A). Patient follow-up visit schedules were aligned with provider preferences, and specific outcome measures were identified. A review of the existing clinic workflow was completed to find areas for improvement in documentation and follow-up scheduling. This includes focusing on consistent blood pressure readings at nurse visits, more defined parameters for timing of follow-up with providers, and more consistent documentation by nurses and providers.

Do phase. The eight-week implementation period began with training sessions for nurses and providers on the patient-facing educational packet and standardized documentation procedures. After a routine provider visit where a diagnosis of hypertension was made, patients were scheduled for a dedicated nurse follow-up visit about two weeks after their initial provider visit. During the dedicated nurse follow-up visit, the patient-facing education packet was distributed to the patient. Proper documentation of in-office blood pressure measurements, delivery of educational packets, education discussed, and scheduling of follow-up visits was completed by all staff using the new standardized protocol. At the halfway point in the project, a review of

documentation and packet distribution assessed early progress and guided any needed adjustments to processes or staffing. Throughout the intervention, the team emphasized structured education, timely follow-up, and reliable documentation to promote sustainable, high-quality care.

Study phase. Evaluation included process measures [completion of education sessions, follow-up adherence, and documentation accuracy] and outcome measures [changes in blood pressure]. Both quantitative results and qualitative feedback from patients and staff were examined for impact and success of the intervention (Udayakumar, 2022; Quester et al., 2024).

Act phase. Findings from the study phase informed the revision and integration of the intervention into routine practice. Effective components were standardized and expanded, while less successful elements were modified based on data and staff input.

Aims

The purpose of this QI initiative is to optimize hypertension control within a Montana primary care clinic by implementing structured intervention focused on education, follow-up and documentation for patients with hypertension. Nurse to patient education was integrated into routine nurse visits as scheduled follow ups for patient diagnosed with hypertension, and a standardized documentation protocol was implemented to support consistent, high-quality charting for the staff.

Methods

Context

The QI initiative took place in a primary care clinic that provides ongoing care for adults (> 18 years of age) with uncontrolled or newly diagnosed hypertension. Patients included in this QI project were seen by their primary care provider during the first six weeks of implementation, between January 5, 2026, and February 13, 2026. All 38 participants were adults with a diagnosis of hypertension, either newly identified or previously established. The interprofessional care team at the primary care clinic consists of physicians, registered nurses, medical assistants, and administrative personnel who collaboratively manage chronic disease care and coordinate follow-up services. The clinic employs an integrated electronic health record (EHR) system that supports clinical documentation, facilitates patient communication through secure messaging and reminders, and enables population-level monitoring of hypertension outcomes. Organizational readiness for quality improvement was present, with the clinic manager endorsing evidence-based hypertension management, demonstrating commitment to patient-centered care, and allocating support for workflow modifications and staff engagement in the project (Figure 3).

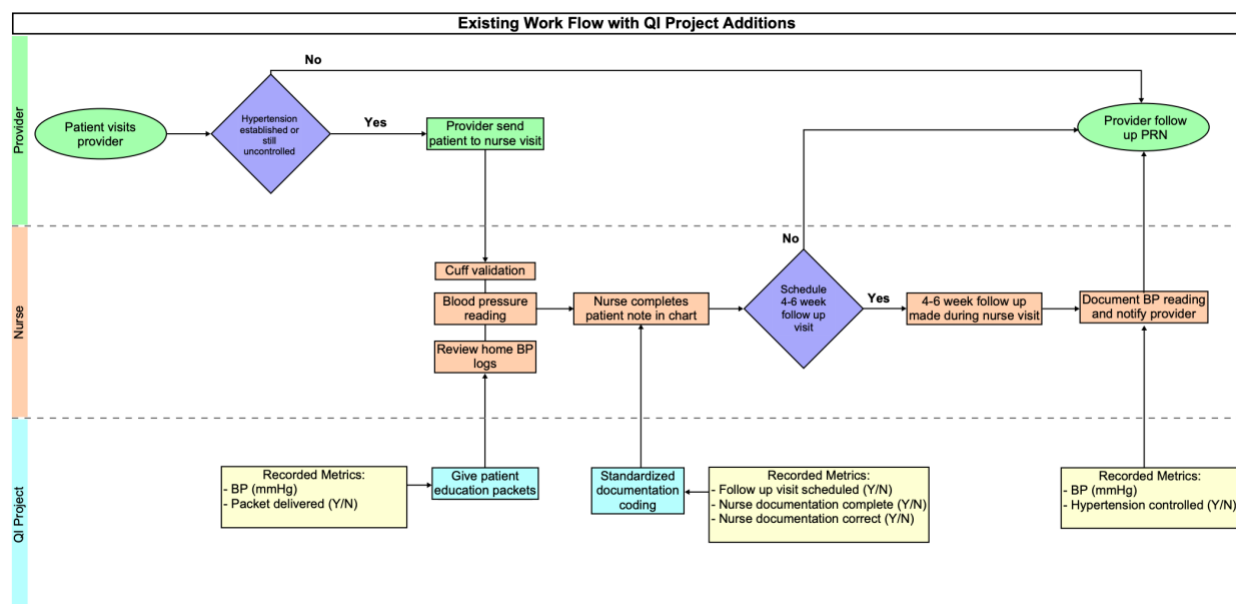


Figure 3. QI Project Workflow Diagram showing existing provider and nurse workflow and QI project additions.

Intervention

The intervention consists of three components designed to address identified gaps in hypertension management: 1) a structured patient educational packet, 2) follow-up coordination, and 3) standardized documentation protocols. These components were created from evidence-based interventions identified in the scoping review and adapted for implementation in this Montana primary care setting. The standardized documentation protocols include templated fields within the electronic health record to capture blood pressure readings, patient education provided, and follow-up plans consistently, thereby promoting accurate tracking of hypertension outcomes and reinforcing guideline-based care. Each patient had an initial follow-up visit with the nurse, followed by additional follow-up appointments with both the provider and nursing staff as needed. During this initial visit, the education packet was reviewed and documentation completed. Additional follow-up visits may then be scheduled in person with the primary care provider or by phone to discuss treatment plans.

Structured Patient Education. Patients identified as having elevated blood pressure or newly diagnosed hypertension received standardized educational packets. The structured educational packet provides patients with clear, written information on blood pressure goals, correct home blood pressure monitoring technique, lifestyle modification strategies, and medication adherence tips to support self-management (Appendix A). Nurses delivered these materials during dedicated 20-minute visits, reinforcing key concepts through discussion and responding to patient questions.

Follow-up Coordination. Nursing staff scheduled patients for focused follow-up appointments at four-to-six-week intervals following the initial hypertension diagnosis or blood pressure elevation. These encounters emphasized verifying blood pressure measurements using standardized techniques, reviewing current medications, assessing adherence barriers, and reinforcing behavioral modifications. Communication between nurses and providers were prioritized to enable timely medication adjustments, consistent with literature emphasizing the importance of follow-up protocols and nurse-driven interventions (Peng et al., 2022).

Standardized Documentation Protocols. A systematic approach to EHR documentation improves communication between nursing staff and providers, ensuring timely medication adjustments and coordinated care delivery. The standardized documentation protocols include templated fields within the electronic health record to capture blood pressure readings, patient education provided, and follow-up plans consistently, thereby promoting accurate tracking of hypertension outcomes and reinforcing guideline-based care. Integration of documentation checkpoints within the electronic health record reinforces protocol adherence and enables real-time performance monitoring. All nursing assessments and interventions were documented using standardized templates that track education provided and facilitate longitudinal blood pressure monitoring

across visits. Standardization helps develop guidelines that providers use for standardized recommendations on when to start medications, how aggressively to treat, which lifestyle changes to emphasize, and how often to monitor patients, while still applying their clinical judgment to each individual.

Measures

A prospective QI methodology employing descriptive statistics and process/outcome measures was selected to evaluate the intervention. This approach enables continuous monitoring of implementation and real-time identification of barriers or necessary modifications. Data collection occurred throughout the implementation period, with weekly performance reviews to detect trends and make cycle improvements as needed.

Analysis

Data analysis focused on the introduction of the educational packet to the patient, changes in blood pressure during follow-up nurse visits, and adherence to the documentation protocol by staff. Descriptive statistics were used to summarize systolic and diastolic blood pressure at the initial provider visit and at the follow-up nurse visit for individual patients within the 38-person sample. Frequencies and percentages were calculated for the number of patients who received an educational packet, the number of patients who achieved a blood pressure of less than 130/80 mmHg, and for nurse completion of the standardized documentation elements. Inferential statistics were then applied by comparing provider- and nurse-visit blood pressure values to determine statistical significance in blood pressure change at both the individual and total sample level.

Results

A total of 38 adult patients with hypertension were seen by providers and scheduled for a follow-up nurse visit during the QI implementation period. Follow-up nurse visits were scheduled between two and three weeks after the initial provider visit. At the initial visit, all 38 patients had blood pressure readings greater than 130/80 mmHg, placing them in the hypertensive range. Of these 38 patients, 35 patients (92.1%) completed the follow-up nurse visit, and 35 (100%) had a blood pressure measurement taken at an on-office visit. Among the patients seen at follow-up nurse visits, 30 patients (85.7%) demonstrated some level of improvement in blood pressure compared with their initial provider visit values, but none had readings below 130/80 mmHg. Of the 30 with improvement in blood pressure reading, 10 (33.3%) had reading below 130/80 mmHg, indicating improved hypertension management.

During nurse visits, 16 educational packets were documented as successfully delivered to the patient, and 19 visits had no documentation of packet distribution and were therefore treated as an unsuccessful packet delivery. Documentation adherence was mixed; nurses successfully completed the standardized documentation protocol in 40.0% of follow-up nurse visits. Table 6 summarizes the data gathered at provider versus nurse visits.

Table 6. Summary of Project Results					
	# Visits	BP >130/80 mmHg	Received Packet	Average Systolic BP (mmHg)	Average Diastolic BP (mmHg)
Provider Visit	38	38	N/A	147.1	85.3
Follow-up Visit	35	25	16	134.7	77.4

The mean reduction in systolic and diastolic blood pressure across the sample was 12.4 mmHg (9.2%) and 7.9 mmHg (9.3%), respectively. Figure 4 shows the recorded systolic blood pressure for each patient at the provider visit and the nurse visit.

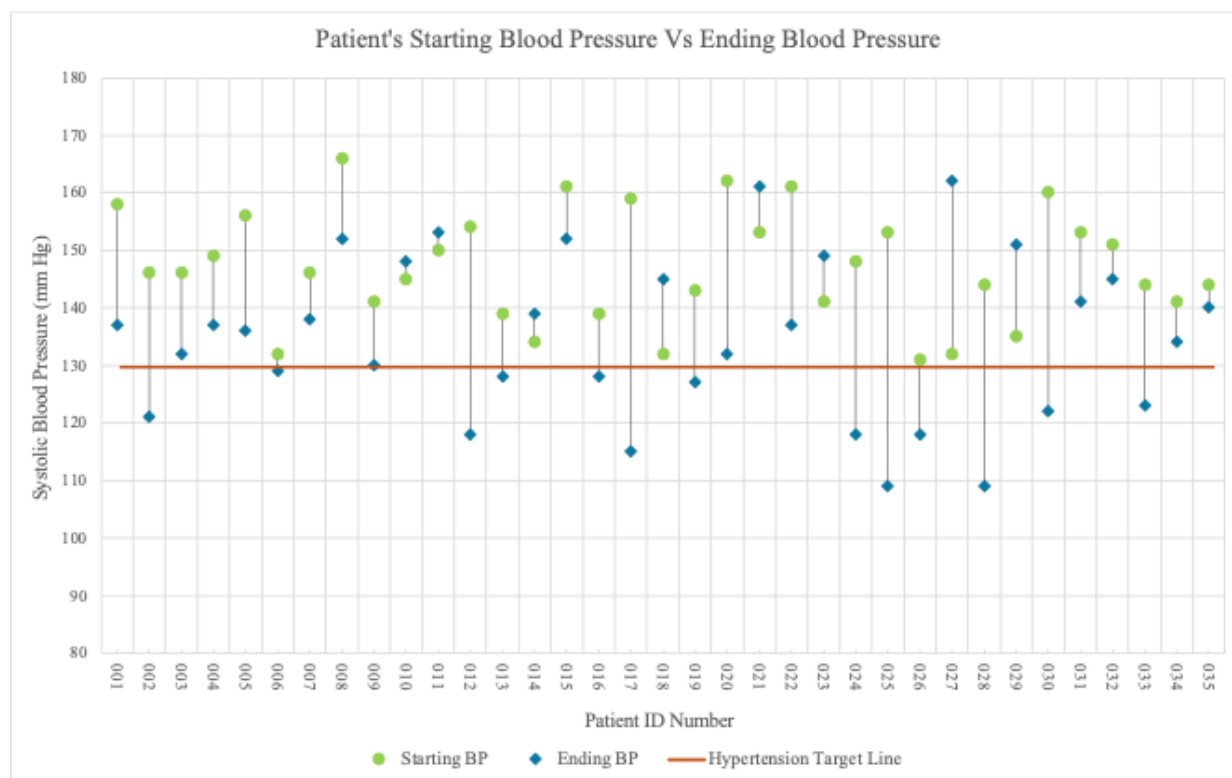


Figure 4. Patient Systolic Blood Pressure at Provider Visit vs. Nurse Visit

Discussion

The aim of this QI project was to optimize hypertension control through nurse-driven education, structured follow-up, and standardized documentation in a primary care clinic. Overall, the findings indicate an enhanced understanding of hypertension among patients, nurses, and providers

All participants arrived at the initial provider visit with uncontrolled hypertension, yet 85.7% showed some improvement at the nurse follow-up visit. The average systolic and diastolic blood pressure decreased significantly with 28.6% of patients no longer meeting criteria for

hypertension at follow-up. Our data indicates that scheduling a prompt nurse follow-up visit likely serves as a built-in accountability mechanism for behavior change between appointments (Ganetzky et al., 2023). With an upcoming appointment, patients are more motivated for medication adherence, self-monitoring, and making dietary or activity changes. When completed consistently these actions can quickly lower systolic and diastolic blood pressure. The follow-up nurse-visit then reinforces these efforts, allows for rapid troubleshooting of barriers, and helps sustain early gains in blood pressure control. Patients' willingness to schedule follow-up visits, coupled with observed improvements in blood pressure, suggests strong motivation to engage in hypertension self-management (Peng et al., 2022; Suwanno et al., 2024; Udayakumar, 2022). These visits provide an ideal opportunity for nurses to deliver the educational packet and further reinforce patients' efforts to control hypertension. Additionally, according to a survey completed by nursing staff, patients appeared more receptive to making lifestyle changes and expressed greater readiness to improve their blood pressure.

The standardized documentation protocol was essential to this intervention as it generated consistent blood pressure data at both the initial provider visit and the subsequent nurse visit, allowing for comparison of values and drawing inferences about longitudinal improvement. The standardized documentation included blood pressure reading in-office, delivery of an educational packet, education discussed, and whether a follow-up visit was scheduled for the patient. However, when nurses did not document whether the hypertension education packet was delivered or if in-person education counseling was provided at the nurse visit, a data gap was created. The data gap limits the ability to determine whether the education packet is contributing to improvements, since there is no reliable way to know which patients received the intervention.

Nurses participating in the project frequently reported that they did not have sufficient time during visits to complete all elements of the documentation template and provide thorough hypertension education to patients, especially when balancing blood pressure measurement, medication review, and other clinical tasks (Gomendi, 2023; Quester et al., 2024; Peng et al., 2022). This constraint highlights the importance of dedicating nurse-led follow-up visits to hypertension care because primary care providers are meant to cover both acute and chronic concerns in a shorter appointment time. Similar time and documentation barriers have been described in other hypertension quality-improvement initiatives, where competing clinical demands and incomplete recording limited evaluation of intervention effectiveness (Gomendi, 2023; Quester et al., 2024; Peng et al., 2022). These time constraints limit opportunity for detailed counseling and self-management support. By contrast, structured nurse follow-up visits are specifically designed to create space for individualized education, review of home blood pressure logs, and reinforcement of lifestyle changes. All of which would be difficult to achieve in standard provider visits.

The project aimed to improve hypertension control through nurse-driven interventions, enhanced documentation protocols and follow-up care. Results showed progress toward this aim in several ways: patients' blood pressure readings improved, nurses and patients' understanding of hypertension and self-management increased, and nurses became more confident in providing structured education during nurse visits. Patient improvement between initial visit and follow-up visit indicates an improvement in patient self-management behaviors even during this short window. This QI project aimed for a 5-10% increase in the hypertension control rate among participants. This goal was met and surpassed with a 28.6% improvement in hypertension control at the end of the eight-week project. Providers and nurses developed a defined and shared

approach to hypertension care and follow-up. This new approach aligns with the project's goal of showing multicomponent interventions combining education, monitoring, and care coordination have enhanced outcomes.

For patients, the intervention increased awareness that hypertension is both serious and manageable. Additionally, patients were able to see the direct impact of self-management on their blood pressure. Nursing staff reported that many patients expressed greater confidence in their ability to manage their condition during this intervention.

For nurses, the project implemented a consistent educational framework, encouraged deeper conversations about lifestyle change with the patient. Additionally, there was a shift of workload, with more education to be completed by the nurses rather than the providers, which is more conducive for learning as the nurses have more time to spend with the patients.

Limitations

The success of this project must be viewed with in the scope of the limitations that presented during the study period. Adherence for the standardized documentation protocol was only 40.0%, resulting in an inconsistency of packet distribution and additional key measurements in the proposed nursing process. With missing data, and incomplete documentation, there is no way to determine if the education materials were distributed at the correct time. This inconsistency limits the ability to draw substantial conclusions regarding the relationship between educational materials and subsequent hypertension control.

In addition, nurses occasionally distributed packets during the initial provider visits rather than reserving them for the nurse follow-up visits. Although this likely benefited individual patients by providing earlier access to educational materials, it placed these encounters outside

the primary tracking process and introduced additional ambiguity about when and how the intervention occurred.

The predominant limitation identified by nurses was a lack of time during the visit to fully complete the documentation template while also measuring blood pressure, counseling patients, and distributing the educational packet. Differences in each nurse's willingness and ability to consistently deliver the packet and complete documentation likely led to uneven implementation of the intervention across patient encounters. These factors also limit generalizability, as clinics with different staffing models, visit lengths, or documentation systems may experience different levels of feasibility and effectiveness.

Recommendations

Drawing on the results and experience of this project, several recommendations emerge for others addressing similar clinical challenges. Most importantly, extending the project study period would likely strengthen the ability to detect meaningful relationships among nurse follow-up visits, receipt of the education packet, and subsequent hypertension control. With additional time, multiple follow-up visits could be scheduled, allowing for more complete documentation of packet distribution, reinforcement of nurse-delivered education, and consecutive blood pressure measurements, making trends easier to interpret. Longer study periods are especially important for educational and behavioral interventions, because lifestyle changes and medication adherence typically evolve over several months before translating into stable blood pressure improvements.

The evidence from this project corroborates findings from other studies discussed in the literature review regarding the hypertension- control benefits of nurse-led follow-up visits and nurse-delivered education. Nurse visits should continue to be used as a central strategy for

hypertension management, with increased time allotted especially for patients with a new diagnosis or persistently elevated blood pressure. Nurses can then provide thorough education about hypertension, lifestyle modification, and medication use, and can answer patient questions without feeling constrained by time. Future practice could also consider a complementary workflow in which nurses introduce and distribute the education packet at the initial provider visit, giving patients time to review the material at home before their first nurse follow-up appointment. At the subsequent visit, the nurse can then use the packet as a shared reference point to clarify misunderstandings, explore which recommendations the patient has attempted, and tailor additional counseling; this approach is particularly important when patients attend only a single follow-up visit, because it maximizes their exposure to self-management information while still leveraging the nurse visit for reinforcement and problem-solving.

The documentation workflow needs to be simplified and embedded into routine practice. Creating a clear, easy-to-use documentation format (for example, a brief template or a set of required fields for packet distribution, home blood pressure readings, and follow-up plans) would reduce omissions and improve data reliability. Regular reminders, brief refreshers, and feedback on documentation performance can further reinforce consistent use.

Future work should more systematically track the distribution and timing of educational packets. A follow-up project could compare outcomes for patients who receive packets during nurse visits versus those who receive them during provider visits, helping determine when education is most acceptable and impactful from the patient perspective. Possibly distributing educational packets at provider visits, then using the nurse visit for additional education and answering questions that patients have come up with. This will require a more reliable method for documenting packet delivery so that exposure can be accurately linked to outcomes.

Finally, based on nurse feedback during the project, consistent use of home blood pressure readings should be encouraged as part of routine care. Nurses can teach patients how to measure blood pressure at home, review logs during visits, and record those readings in the chart using a standardized format. Integrating home and office readings in this way can support more precise treatment decisions, reduce unnecessary in-person visits, and further empower patients to participate actively in managing their hypertension. The education packets used in this project included step-by-step instructions for obtaining accurate home blood pressure measurements. Providing this guidance from the same nurses' patients see in the clinic reinforces consistent technique across settings, helping to standardize in-office and at-home readings and reduce inconsistencies between the two.

Conclusion

This project demonstrated that structured nurse follow-up visits are a critical component of effective hypertension control by providing protected time for blood pressure measurement, review of home readings, and individualized discussion of the education packet. Across the project, 85.7% of patients showed lower blood pressure at the nurse visit compared with the initial provider visit. When dedicated visits are combined with targeted education, and proper documentation the success rate for hypertension self-management increases. The overall outcomes of this project indicate that combined interventions are a valuable addition to the hypertension management process and should be incorporated by all who see hypertension patients.

CHAPTER FOUR

ADVANCED NURSING ESSENTIALS REFLECTION

Throughout my Doctor of Nursing Practice (DNP) coursework, I have progressively demonstrated the AACN essentials through both classroom learning and clinical application. Through rigorous coursework, hands-on clinical and quality improvement experiences, I have developed and demonstrated competencies across multiple domains essential to doctoral-level nursing practice. The AACN essentials that I found to be most prevalent in my experiences were person-centered care, population health management, scholarship, interprofessional collaboration, and systems-based practice (American Association of Colleges of Nursing, 2021). With a focus on these essentials, I will reflect on my experiences and how I specifically improved each of these areas throughout my advanced nursing degree.

Domain 2: person-centered care

Competency of person-centered care is reflected through multiple areas of clinical practice and scholarship. In my clinical encounters, I prioritize understanding each patient's values, health goals, and unique social context by using open-ended questions, motivational interviewing, and therapeutic communication (AACN, 2021). This person-centered approach fosters shared decision-making and ensures care plans are realistic and aligned with patients' readiness to change. My DNP hypertension quality improvement project, which was focused on hypertension control through nurse-driven interventions, further demonstrated this competency through the creation of an evidence-based educational packet for patients with elevated blood pressure. Through coursework in health assessment, primary care skills and evidence-based practice, I gained the advanced scientific knowledge needed to guide evidence-based material

development. I applied this knowledge to create patient education resources written at an appropriate health literacy level.

Furthermore, through my clinical experiences in primary care, I employed advanced communication and collaboration skills to provide preventive care and advocacy for families, incorporating family-centered assessments and strategies for health promotion.

This demonstrates my ability to integrate ethical advocacy principles, ensuring that care delivery remains culturally responsive, and grounded in respect for the person. Collectively, these experiences illustrate the integration of person-centered care across communication, clinical reasoning, and leadership, highlighting my capacity to model compassionate, evidence-informed, and individualized care in advanced nursing practice.

Domain 3: population health

My DNP hypertension quality improvement project displays my achievement in Population Health by translating evidence into actions that improved outcomes for a specific patient population. Recognizing the high prevalence of uncontrolled hypertension in the clinic's adult population, I applied principles of assessment and systems-level thinking to identify patterns of poor follow-up and limitations in patient education. Working collaboratively with nurses, providers, and clinic leadership, I implemented nurse-driven hypertension visits as an intervention to improve blood pressure control and reduce cardiovascular risk. This initiative reflected skills from clinical experience, where I integrated assessment data and evidence-based interventions to promote health and prevent disease among families. While learning about diverse communities, I deepened my understanding of how social, economic, and cultural factors contribute to health disparities, guiding the development of educational materials that addressed barriers to care among local populations.

The development and evaluation of this project further strengthened my competency in population health management and value-based care. Guided by finance and ethics courses, I conducted a cost–benefit analysis that examined staff time, and educational resource costs. In additional courses, I improved my ability to synthesize project findings for populations, a critical step for evidence-based interventions. These experiences reflect my ability to design, implement, and evaluate strategies that address populations and their needs (AACN, 2021).

Domain 4: scholarship for the nursing discipline

Scholarship for the Nursing Discipline is shown in my ability to generate practice-focused questions from clinical observations and transform them into evidence-based interventions that improved patient outcomes (AACN, 2021). I learned to critically appraise literature related to hypertension management, nurse-driven interventions, and patient education strategies. These skills allowed me to identify best practices and apply evidence within my quality improvement project to address uncontrolled hypertension. While learning primary care skills and procedures, I advanced my ability to apply clinical knowledge and decision-making skills.

I also demonstrated the translation of scholarly evidence into clinical application with my nurse-driven intervention, aligning with the DNP goal of bridging the gap between research and practice. The protocol I developed incorporated structured assessment, education, and documentation components informed by current research and guidelines. I conducted a comparative evaluation using pre- and post-intervention blood pressure data to assess the program's effectiveness in improving control rates. Reflection on these findings guided my recommendations for sustainability and scalability within the primary care setting, reinforcing scholarship as an ongoing process of inquiry and improvement rather than an endpoint.

My leadership in this project also modeled the nature of nursing scholarship—mentorship, dissemination, and continuous learning (AACN, 2021). I collaborated with interdisciplinary team members to translate evidence into practice for patients, reinforcing the value of communication and interprofessional engagement. Diversity and ethics courses strengthened my understanding of how nursing scholarship must account for social justice, cultural sensitivity, and ethical policy alignment when addressing population health concerns. Collectively, these experiences created a scholarly identity grounded in critical inquiry, evidence translation, and leadership for practice advancement.

Domain 6: Interprofessional partnerships

Interprofessional Partnerships are reflected through my ability to lead and collaborate within diverse healthcare teams to improve patient outcomes (AACN, 2021). During my DNP project, I worked closely with physicians, nurses, medical assistants, and clinic administrators to implement a nurse-driven hypertension education intervention. This required clarifying team roles, aligning responsibilities with scope of practice, and ensuring that workflow integration supported both efficiency and quality care. I applied concepts of effective interdisciplinary collaboration to foster a supportive environment where each team member's expertise was valued. To maintain alignment across disciplines, I communicated project goals and progress through staff meetings, written communications, and individualized discussions.

As part of this work, I standardized documentation procedures within the electronic health record (EHR) to improve information sharing among team members, ensuring consistency in patient education, assessment, and follow-up. These changes enhanced transparency and enabled continuous feedback. Through clinical experience, I further developed advanced

communication and collaboration skills in coordinating preventive and primary care for individuals.

My clinical rotations as a nurse practitioner student also deepened my understanding of leadership and delegation within interprofessional contexts (AACN, 2021). I delegated tasks such as immunizations, ear irrigations, blood pressure checks, and targeted education to nursing and medical assistant staff while maintaining responsibility for comprehensive patient management. Together, these experiences demonstrate my growth as a collaborative practitioner and leader who can bridge communication gaps and align team goals. By promoting shared purpose and accountability, I have strengthened the culture of teamwork within my clinical setting—ultimately setting the stage for sustained, evidence-informed collaboration across healthcare.

Domain 7: systems-based practice

My development in Systems-Based Practice is demonstrated through the design and implementation of my DNP hypertension quality improvement project. Early in project planning, I conducted an in-depth evaluation of the clinic's existing processes for hypertension management, including appointment scheduling, follow-up protocols, and documentation workflows. This assessment revealed challenges that contributed to suboptimal blood pressure control among patients. This analysis guided the creation of a nurse-driven intervention that complemented current workflows while enhancing efficiency and consistency. Through this process, I gained practical experience in examining structure, process, and outcome relationships.

As project lead, I coordinated the development of a comprehensive hypertension education packet that included evidence-based information on target blood pressures, medication

adherence, nutrition, physical activity, and self-monitoring strategies. I collaborated with clinic leadership and nursing staff to integrate these materials into routine care, ensuring that the intervention was feasible within the existing system infrastructure. I evaluated system-level outcomes such as blood pressure control rates, nursing workflow efficiency, and patient education continuity. These evaluations highlights improvements not only in individual patient outcomes but also in team-based performance.

Systems-based practice also requires consideration of sustainability. To support long-term adoption, I worked with clinical leaders to plan expansion of nurse-driven hypertension visits across all family medicine practices within the organization. Through this work, I transitioned from focusing solely on patient care processes to influencing system-level policies and procedures that promote continuity, efficiency, and health equity across multiple practice settings.

Ultimately, this domain reflects my growth as a nurse leader capable of bridging clinical practice with organizational strategy (AACN, 2021). My experiences integrating evidence-based interventions into a complex primary care system display effective process improvement and outcome evaluation.

Conclusion

Reflecting on my DNP journey, I see how each domain has built on the others to create a firm foundation for leadership in advanced nursing practice. By integrating evidence, collaborating across disciplines, and maintaining a strong commitment to both person-centered and population-level outcomes, I have developed the capacity to lead meaningful change within complex health systems. I have strengthened my ability to deliver person-centered care, address population health needs, engage in practice scholarship, create effective interprofessional

partnerships, and guide system-level practice changes. Together, these experiences demonstrate my readiness to serve as a DNP-prepared APRN leader who can translate evidence into sustainable improvements in health and population outcomes.

REFERENCES CITED

- American Academy of Family Physicians. (2022). Hypertension- Clinical practice guideline. <https://www.aafp.org/family-physician/patient-care/clinical-recommendations/all-clinical-recommendations/highbloodpressure.html>
- CardioSmart. (n.d.). High blood pressure. American College of Cardiology. <https://www.cardiosmart.org/topics/high-blood-pressure>
- Edward, A., Kagaruki, G. B., Manase, F., Appel, L. J., & Matsushita, K. (2022). Effectiveness of instructional videos for enhancing healthcare provider competencies for hypertension management – a pre-post study in primary healthcare settings, Tanzania. *BMC Health Services Research*, 22(1), 721. <https://doi.org/10.1186/s12913-022-08064-5>
- Fryar, C. D., Kit, B., Carroll, M. D., & Afful, J. (2024). Hypertension prevalence, awareness, treatment, and control among adults age 18 and older: United States, August 2021–August 2023. *NCHS Data Brief*, 511. <https://www.cdc.gov/nchs/products/databriefs/db511.htm>
- Ganetzky, D. B. M., Purcell, A., Truchil, R., Tjaden, A. L., & Cronholm, P. F. (2023). Patient-centered hypertension management: Two team-based models. *Family Practice Management*, 30(4), 12–16. <https://www.aafp.org/pubs/fpm/issues/2023/0700/hypertension-management.html>
- Gomendi, W. M. (2023). *Improving blood pressure screening and control in primary care: A quality initiative*. <https://scholarworks.montana.edu/handle/1/17866>
- Health Resources and Services Administration, Maternal and Child Health Bureau. (2020). *III.B. Overview of the state- Montana- 2020*. <https://mchb.tvvisdata.hrsa.gov/Narratives/Overview/516d7674-64a1-4b99-940a-3f6831488695>
- Hellgren, M., Wennberg, P., Hedin, K., Jansson, S., Nilsson, S., Nilsson, G., Wändell, P., & Bengtsson Boström, K. (2023). Hypertension management in primary health care: a survey in eight regions of Sweden. *Scandinavian Journal of Primary Health Care*, 41(3), 343–350. <https://doi-org.proxybz.lib.montana.edu/10.1080/02813432.2023.2242711>
- Institute for Healthcare Improvement. (2023). *Quality Improvement Essentials Toolkit*. <https://www.ihl.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx>
- Martins Falcão, L., Cavalcante Guedes, M. V., Pereira Borges, J. W., & Freitas da Silva, G. R. (2023). Educational intervention performed by nurses for blood pressure control: a systematic review with meta-analysis. *Revista Latino-Americana de Enfermagem (RLAE)*, 31, 1–12. <https://doi-org.proxybz.lib.montana.edu/10.1590/1518-8345.6648.3930>

- Montana Department of Public Health and Human Services. (2021). High blood pressure fact sheet. <https://dphhs.mt.gov/assets/publichealth/Cardiovascular/Resources/HTNFactSheet2021.pdf>
- Montana Department of Public Health and Human Services. (2022). Chronic disease in Montana. <https://dphhs.mt.gov/assets/publichealth/Asthma/Data and Fact Sheets/ChronicDiseaseBurdenFactSheet.pdf>
- National Heart, Lung, and Blood Institute. (n.d.). DASH eating plan. U.S. Department of Health and Human Services. <https://www.nhlbi.nih.gov/education/dash-eating-plan>
- Oliveira, G., Carvalho Araújo Moreira, A., Caniçali Primo, C., & Schimith, M. D. (2024). Software That Qualifies Nursing Care for People with Hypertension in Primary Health Care. *Texto & Contexto Enfermagem*, 33, 1–13. <https://doi-org.proxybz.lib.montana.edu/10.1590/1980-265X-TCE-2024-0077en>
- Peng, M., Shi, X., Zhu, L., & Wang, Z. (2022). Follow-up management service and health outcomes of hypertensive patients in China: A cross-sectional analysis from the national health service survey in Jiangsu province. *Frontiers in Public Health*, 10, 956711. <https://doi.org/10.3389/fpubh.2022.956711>
- Quester, R., Björck, S., Manhem, K., Nätman, J., Andersson, S., & Hjerpe, P. (2024). Improving cardiovascular control in a hypertensive population in primary care. Results from a staff training intervention. *Scandinavian Journal of Primary Health Care*, 42(2), 347–354. <https://doi-org.proxybz.lib.montana.edu/10.1080/02813432.2024.2326470>
- Suwanno, J., Phonphet, C., Mayurapak, C., Ninla, aesong, P., & Thaimwong, L. (2024). Exploring factors associated with hypertension self-care in primary care: The role of nurse education levels and patient-related factors. *International Journal of Nursing Practice (John Wiley & Sons, Inc.)*, 30(5), 1–14. <https://doi-org.proxybz.lib.montana.edu/10.1111/ijn.13208>
- Thomas, S. M., & Cassells, H. B. (2017). Quality improvement project for managing elevated blood pressure in a primary care setting. *Integrated Blood Pressure Control*, 10, 25–32. <https://doi.org/10.2147/IBPC.S137112>
- Udayakumar, K. (2022). *A quality-improvement project on the implementation of health coaching for hypertension control in primary care*. <https://scholarworks.montana.edu/handle/1/16971>
- World Health Organization. (2025, September 22). Uncontrolled high blood pressure puts over a billion people at risk. <https://www.who.int/news/item/23-09-2025-uncontrolled-high-blood-pressure-puts-over-a-billion-people-at-risk>

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APPENDICES

APPENDIX A

HYPERTENSION EDUCATION PACKET

BLOOD PRESSURE



KNOW YOUR NUMBERS

BLOOD PRESSURE is the force of your blood moving against the walls of your arteries. It's expressed as **TWO NUMBERS**:

Top Number:
SYSTOLIC (mm Hg)
The pressure or force in the arteries when the heart beats

Bottom Number:
DIASTOLIC (mm Hg)
The pressure measured between heartbeats



Over time elevated or high blood pressure weakens your heart, blood vessels and kidneys. This makes having a stroke, heart attack, or heart failure more likely



Lifestyle Changes That Lower Blood Pressure



Move More
Get regular physical activity



Focus on Nutrition
Follow the DASH diet and eat potassium-rich vegetables



Cut Salt
Aim for 1,500 mg of sodium or less per day



Limit or Avoid Alcohol
For men, not more than 2 drinks per day; for women, 1



Lose Weight
Losing just a few pounds can make a big difference



Don't Smoke or Vape
If you smoke, stop



De-Stress
Meditation and rest help



Get Quality Sleep
Treat sleep apnea, if present

For more information, visit [CardioSmart.org/BloodPressure](https://www.cardiosmart.org/BloodPressure)

@ACCinTouch #CardioSmart



Information provided for educational purposes only. Please talk to your health care professional about your specific health needs.
To download or order posters on other topics, visit [CardioSmart.org/Posters](https://www.cardiosmart.org/Posters)

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How to Take Your Blood Pressure at Home



Knowing if you have high blood pressure and controlling it depends on **correct readings**.

6 Tips to Correctly Measure Your Blood Pressure

1. Be sure your monitor is accurate

- If you need help choosing one, visit [ValidateBP.org](https://www.validatebp.org) or ask a member of your health care team.
- Bring the monitor to your next health visit to compare its results with those taken in the office.

2. Get ready to take a reading

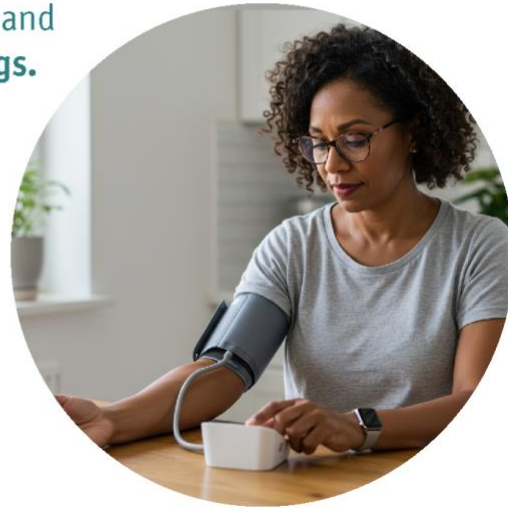
- Avoid smoking, caffeinated beverages, or exercise for 30 minutes.
- Empty your bladder.
- Rest for at least 5 minutes and try to relax - that means ideally no talking, using your phone or watching TV.

3. Sit correctly

- Sit up straight in an armchair, with back supported.
- Place feet flat on the floor.
- Rest your arm comfortably at heart level on a table.

4. Place cuff above the bend in the elbow

- Make sure the cuff is the correct size for your arm and fits properly.

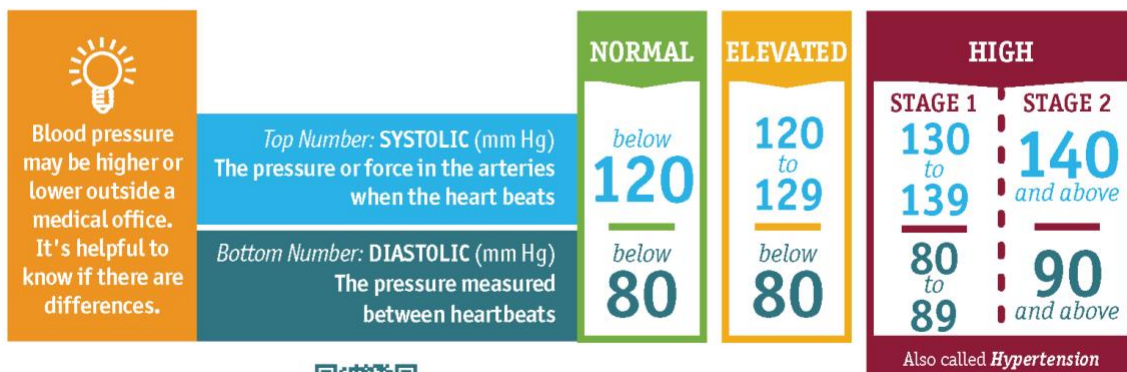


5. Take at least 2 readings, 1 minute apart, twice a day (so 4 readings total)

- 2 readings in the morning before taking any blood pressure medicine.
- 2 readings around bedtime.

6. Record your results

- Bring them to your next health visit.
- Keep an eye on how readings compare to your target goal.



For more information, visit
[CardioSmart.org/BloodPressure](https://www.cardiosmart.org/BloodPressure)

DAY 1 A Week With DASH

The menu below contains the recommended number of daily servings from each DASH food group as well as a heart healthy 2,300 mg of sodium. You can easily reduce the sodium in this menu to 1,500 mg by substituting some key food items, which are highlighted in yellow. Just follow the tips.

The Day 1 menu contains this number of servings from each DASH Food Group



BREAKFAST		SODIUM (MG)	
●	¾ cup bran flakes cereal:	220	219 mg less sodium Try shredded wheat cereal instead of bran flakes.
●	+ 1 medium banana	1	
●	+ 1 cup low-fat milk	107	
●	1 slice whole wheat bread:	149	
●	+ 1 tsp soft (tub) margarine	26	
●	1 cup orange juice	5	
LUNCH		SODIUM (MG)	
●	¾ cup chicken salad:	179	59 mg less sodium Make the chicken salad without salt.
●	+ 2 slices whole wheat bread	299	
●	+ 1 Tbsp Dijon mustard	373	198 mg less sodium Use regular mustard in place of Dijon mustard.
	salad:		
●	+ ½ cup fresh cucumber slices	1	
●	+ ½ cup tomato wedges	5	
●	+ 1 Tbsp sunflower seeds	0	
●	+ 1 tsp Italian dressing, low calorie	43	
●	½ cup fruit cocktail, juice pack	5	
DINNER		SODIUM (MG)	
●	3 oz roast beef, eye of the round:	35	66 mg less sodium Use low-sodium, reduced-fat cheddar cheese.
●	+ 2 Tbsp beef gravy, fat-free	165	
●	1 cup green beans, sautéed with:	12	
●	+ ½ tsp canola oil	0	
●	1 small baked potato:	14	
●	+ 1 Tbsp sour cream, fat-free	21	26 mg less sodium Use unsalted margarine.
●	+ 1 Tbsp natural cheddar cheese, reduced-fat	67	
●	+ 1 Tbsp chopped scallions	1	
●	1 small whole wheat roll:	148	
●	+ 1 tsp soft (tub) margarine	26	
●	1 small apple	1	
●	1 cup low-fat milk	107	
SNACKS		SODIUM (MG)	
●	½ cup almonds, unsalted	0	
●	¼ cup raisins	4	
●	½ cup fruit yogurt, fat-free, no sugar added	86	
TOTAL SODIUM (MG) FOR DAY 1		2,101	

Total nutrients per day 2,062 calories, 63g total fat, 28% calories from fat, 13g saturated fat, 6% calories from saturated fat, 155mg cholesterol, 2,101mg sodium, 284g carbohydrate, 114g protein, 1,220mg calcium, 594mg magnesium, 4,909mg potassium, 37g fiber

DASH EATING PLAN

The DASH Eating Plan is a heart healthy approach that has been scientifically proven to lower blood pressure and have other health benefits. To learn more, go to www.nhlbi.nih.gov/DASH.



NIH National Heart, Lung, and Blood Institute

What's on Your Plate? 1,800–2,000 calories a day

Learn how your current food habits compare with the DASH eating plan by using this worksheet for 1–2 days. List the food amounts, calories, and sodium for all you eat and drink on a given day. Track your servings by checking off the corresponding number of circles.

To find your specific daily calorie needs, use the [Body Weight Planner \(niddk.nih.gov/bwp\)](http://niddk.nih.gov/bwp). Find the information about calories and the amount of sodium in foods on nutrition facts labels, mobile applications, or online.

TODAY'S DATE

/ /

BREAKFAST	CALORIES	SODIUM (MG)	DAILY SERVINGS
			These are the recommended servings in the DASH eating plan food groups.
			Fill in the number of servings that match the food item you've listed.
			See how what you eat compares to the DASH eating plan.
LUNCH			
			Grains (mostly whole grains) 6–8 servings per day ○ ○ ○ ○ ○ ○ ○ ○
			Vegetables 4–5 servings per day ○ ○ ○ ○ ○
			Fruits 4–5 servings per day ○ ○ ○ ○ ○
DINNER			
			Dairy (fat-free/low-fat) 2–3 servings per day ○ ○ ○
			Lean Meats, Fish, and Poultry 6 servings or less per day ○ ○ ○ ○ ○ ○
			Fats and Oils 2–3 servings per day ○ ○ ○
SNACKS			
			Nuts, Seeds, and Legumes 4–5 servings per week ○ ○ ○ ○ ○
Total your numbers. Your daily targets are 1,800–2,000 calories and a sodium level between 1,500 and 2,300 milligrams. If you miss your targets, see A Week With DASH for menu ideas to get closer to your goals.			
		TOTAL CALORIES	TOTAL SODIUM (MG)
			Sweets and Added Sugars 5 servings or less per week ○ ○ ○ ○ ○

DASH EATING PLAN

The DASH Eating Plan is a heart healthy approach that has been scientifically proven to lower blood pressure and have other health benefits. To learn more, go to www.nhlbi.nih.gov/DASH.



NIH National Heart, Lung, and Blood Institute

Following the DASH Eating Plan FOR 1,800 TO 2,000 CALORIES PER DAY

Grains

6–8 SERVINGS PER DAY

Sources of fiber
and magnesium

SERVING SIZE

1 slice bread
1 oz dry cereal
½ cup cooked rice,
pasta, or cereal

EXAMPLES

Oatmeal, grits, brown rice, unsalted pretzels and popcorn, whole grain cereal, whole wheat bread, rolls, pasta, English muffin, pita bread, bagel

Vegetables

4–5 SERVINGS PER DAY

Sources of potassium,
magnesium, and fiber

SERVING SIZE

1 cup raw leafy
vegetable
½ cup cut-up raw or
cooked vegetable
½ cup vegetable juice

EXAMPLES

Broccoli, carrots, collards, green beans, green peas, kale, lima beans, potatoes, spinach, squash, sweet potatoes, tomatoes

Fruits

4–5 SERVINGS PER DAY

Sources of potassium,
magnesium, and fiber

SERVING SIZE

1 medium fruit
¼ cup dried fruit
(unsweetened)
½ cup fresh, frozen, or
canned fruit, or fruit juice

EXAMPLES

Apples, apricots, bananas, dates, grapes, oranges, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, raisins, strawberries, tangerines

Dairy

2–3 SERVINGS PER DAY

Sources of calcium
and protein

SERVING SIZE

1 cup milk
1 cup yogurt
1½ oz cheese

EXAMPLES

Fat-free (skim) or low-fat (1%) milk or buttermilk; fat-free, low-fat, or reduced-fat cheese; fat-free or low-fat regular or frozen yogurt; fortified soy beverage; lactose-free products

Lean Meats, Fish, Poultry, and Eggs

6 SERVINGS OR LESS PER DAY

Sources of protein
and magnesium

SERVING SIZE

1 oz cooked meats,
fish, or poultry
1 egg

EXAMPLES

Chicken or turkey without skin; salmon, tuna, trout; lean cuts of beef, pork, and lamb

Fats and Oils

2–3 SERVINGS PER DAY

Sources of energy
and vitamin E

SERVING SIZE

1 tsp soft margarine
1 tsp vegetable oil
1 tbsp mayonnaise
2 tbsp salad dressing

EXAMPLES

Soft margarine, vegetable oil (such as canola, corn, olive, or safflower), low-fat mayonnaise, light salad dressing

Nuts, Seeds, and Legumes

4–5 SERVINGS PER WEEK

Sources of energy,
magnesium, protein,
and fiber

SERVING SIZE

½ cup or **1½ oz** nuts
(unsalted)
2 tbsp peanut butter
2 tbsp or **½ oz** seeds
½ cup cooked legumes
(dry beans and peas)

EXAMPLES

Almonds, hazelnuts, mixed nuts, peanuts, walnuts, sunflower seeds, peanut butter, kidney beans, lentils, split peas

Sweets and Added Sugars

5 SERVINGS OR LESS PER WEEK

Sweets should
be low in fat

SERVING SIZE

1 tbsp sugar
1 tbsp jelly or jam
½ cup sorbet, gelatin
1 cup lemonade

EXAMPLES

Fruit-flavored gelatin, fruit punch, hard candy, jelly, maple syrup, sorbet and ices, sugar

**DASH EATING
PLAN**

The DASH Eating Plan is a heart healthy approach that has been scientifically proven to lower blood pressure and have other health benefits. To learn more, go to www.nhlbi.nih.gov/DASH.



National Heart, Lung,
and Blood Institute

Following the DASH Eating Plan FOR 1,800 TO 2,000 CALORIES PER DAY



Grains

6-8 SERVINGS PER DAY

Sources of fiber and magnesium

SERVING SIZE

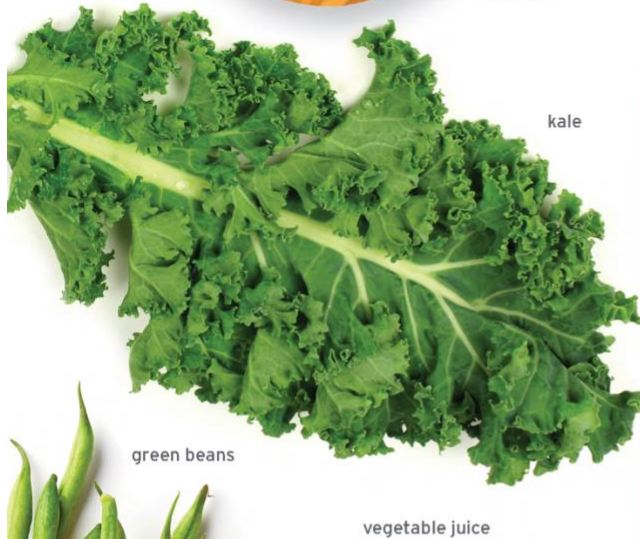
1 slice bread

1 oz dry cereal

½ cup cooked rice, pasta, or cereal

EXAMPLES

Oatmeal, grits, brown rice, unsalted pretzels and popcorn, whole grain cereal, whole wheat bread, rolls, pasta, English muffin, pita bread, bagel



Vegetables

4-5 SERVINGS PER DAY

Sources of potassium, magnesium, and fiber

SERVING SIZE

1 cup raw leafy vegetable

½ cup cut-up raw or cooked vegetable

½ cup vegetable juice

EXAMPLES

Broccoli, carrots, collards, green beans, green peas, kale, lima beans, potatoes, spinach, squash, sweet potatoes, tomatoes

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NIH National Heart, Lung, and Blood Institute

Following the DASH Eating Plan FOR 1,800 TO 2,000 CALORIES PER DAY



Fruits

4–5 SERVINGS PER DAY

Sources of potassium, magnesium, and fiber

SERVING SIZE

1 medium fruit

$\frac{1}{4}$ cup dried fruit (unsweetened)

$\frac{1}{2}$ cup fresh, frozen, or canned fruit, or fruit juice

EXAMPLES

Apples, apricots, bananas, dates, grapes, oranges, grapefruit, grapefruit juice, mangoes, melons, peaches, pineapples, raisins, strawberries, tangerines

Dairy

2–3 SERVINGS PER DAY

Sources of calcium and protein

SERVING SIZE

1 cup milk

1 cup yogurt

$1\frac{1}{2}$ oz cheese

EXAMPLES

Fat-free (skim) or low-fat (1%) milk or buttermilk; fat-free, low-fat, or reduced-fat cheese; fat-free or low-fat regular or frozen yogurt; fortified soy beverage; lactose-free products

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Following the DASH Eating Plan FOR 1,800 TO 2,000 CALORIES PER DAY



Lean Meats, Fish, Poultry, and Eggs

6 SERVINGS OR LESS PER DAY

Sources of protein and magnesium

SERVING SIZE

1oz cooked meats, fish, or poultry
1 egg

EXAMPLES

Chicken or turkey without skin; salmon, tuna, trout; lean cuts of beef, pork, and lamb

Fats and Oils

2-3 SERVINGS PER DAY

Sources of energy and vitamin E

SERVING SIZE

1tsp soft margarine
1tsp vegetable oil
1tbsp mayonnaise
2tbsp salad dressing

EXAMPLES

Soft margarine, vegetable oil (such as canola, corn, olive, or safflower), low-fat mayonnaise, light salad dressing

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and Blood Institute

Following the DASH Eating Plan FOR 1,800 TO 2,000 CALORIES PER DAY



Nuts, Seeds, and Legumes

4–5 SERVINGS PER WEEK

Sources of energy, magnesium, protein, and fiber

SERVING SIZE

$\frac{1}{2}$ cup or $1\frac{1}{2}$ oz nuts (unsalted)

2 tbsp peanut butter

2 tbsp or $\frac{1}{2}$ oz seeds

$\frac{1}{2}$ cup cooked legumes (dry beans and peas)

EXAMPLES

Almonds, hazelnuts, mixed nuts, peanuts, walnuts, sunflower seeds, peanut butter, kidney beans, lentils, split peas

Sweets and Added Sugars

5 SERVINGS OR LESS PER WEEK

Sweets should be low in fat

SERVING SIZE

1 tbsp sugar

1 tbsp jelly or jam

$\frac{1}{2}$ cup sorbet, gelatin

1 cup lemonade

EXAMPLES

Fruit-flavored gelatin, fruit punch, hard candy, jelly, maple syrup, sorbet and ices, sugar

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DASH EATING PLAN

Tips To Reduce Salt and Sodium

HEALTHY EATING, PROVEN RESULTS

Studies have found that the DASH eating plan can lower blood pressure in as fast as 2 weeks. Eating less sodium creates even bigger heart healthy benefits.

Eat your veggies.

Choose plain fresh, frozen, or canned (low-sodium or no-salt-added) vegetables and season them yourself.

Fresh is best.

Choose fresh or frozen skinless poultry, fish, and lean cuts of meat rather than those that are marinated, canned, smoked, brined, or cured.

Go "low or no."

Check the Nutrition Facts labels to compare sodium levels in foods. Choose low- or reduced-sodium, or no-salt-added versions of foods.

Pay attention to preparation.

Limit cured foods (such as bacon and ham); foods packed in brine (such as pickles, pickled vegetables, olives, and sauerkraut); and condiments (such as mustard, horseradish, ketchup, and barbecue sauce). Limit even lower sodium versions of soy sauce and teriyaki sauce, which should be used as sparingly as table salt.

Subtract, don't add.

Canned foods such as tuna and beans can be rinsed to remove some of the sodium. Cook rice, pasta, and hot cereals without salt. Cut back on instant or flavored rice, pasta, and cereal mixes, which usually have added salt.

Limit salty processed foods.

Skip or limit frozen dinners and mixed dishes such as pizza, packaged mixes, canned soups or broths, and salad dressings, which often have a lot of sodium. Prepare and eat more foods at home, where you can control how much sodium is added.

Spice it up.

Boost flavor with herbs, spices, lemon, lime, vinegar, or salt-free seasoning blends instead of salt or salty seasonings like soy sauce, spice blends, or soup mixes. Start by cutting salt in half and work your way toward healthy substitutes.

zucchini

Swiss cheese

bread

EASY TIPS FOR DINING OUT

Move the salt shaker away.

This simple first step could become second nature.

Research the restaurant's menu before going out.

Check online nutrition information and then avoid these on the menu: pickled, cured, smoked, soy sauce.

Make special requests.

Ask that your meal be prepared without added salt, MSG, or salty ingredients such as bacon, pickles, olives, and cheese.

Easy does it on the condiments.

A little goes a long way for mustard, ketchup, horseradish, pickles, and sauces with salt-containing ingredients.

Go for healthy appetizers and side dishes.

Choose fruit or vegetables instead of salty snacks, chips, or fries.

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NIH

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Where's the sodium?



brown rice



green beans



strawberries



black-eyed peas



milk



tuna

Most of the sodium we eat comes from added salt in packaged or prepared foods. Only a small amount occurs naturally in foods. Check Nutrition Facts labels and choose foods with lower sodium levels.

Grains	Serving Size	Milligrams of Sodium
Cooked cereal, rice, pasta (unsalted)	½ cup	0–15
Ready-to-eat packaged cereal	½ cup	0–360
Bread	1 slice	120–210
Vegetables		
Fresh or frozen, cooked without salt	½ cup	0–70
Canned or frozen with sauce	½ cup	190–430
Pasta sauce, jarred	½ cup	270–490
Fruits		
Fresh, frozen, canned	½ cup	0–5
Dairy		
Milk	1 cup	110
Yogurt	1 cup	85–190
Natural cheeses	1½ oz	90–480
American cheese, processed	1 slice	200–240
Nuts, Seeds, and Legumes		
Nuts, unsalted	⅓ cup	0–5
Nuts, salted	⅓ cup	70–260
Beans, cooked from dried or frozen (unsalted)	½ cup	0–10
Beans, canned	½ cup	130–450
Meats, Fish, and Poultry		
Fresh or frozen meat, fish, poultry	3 oz	55–75
Fresh or frozen poultry, with broth	3 oz	100–170
Tuna, canned, water pack	3 oz	140–180
Turkey breast, lunch meat	3 oz	540–810
Ham, lean, roasted	3 oz	920–950

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PREVENTION

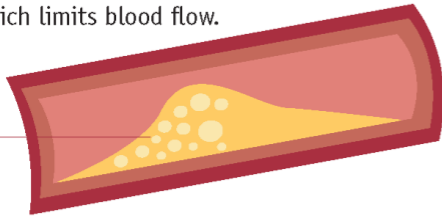
HEALTHY HABITS PROTECT YOUR HEART



HEALTHY HABITS THROUGHOUT LIFE — such as eating better, moving more, keeping a healthy weight, and not smoking — are important steps to prevent heart disease. Even if you've had a heart attack or stroke, healthy habits can go a long way to making it less likely you have another one.

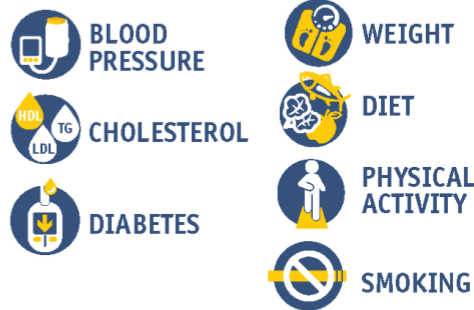
▶ What **CAUSES** Heart Disease?

Atherosclerotic cardiovascular disease (ASCVD) can cause a heart attack or stroke. It happens when **PLAQUE** — made up of fat, cholesterol, and other substances — builds up in the walls of blood vessels called arteries. Over time, this plaque can harden and narrow the arteries, which limits blood flow.



▶ What Increases **YOUR RISK**?

Certain factors raise your chance of developing heart disease. Some you can't change — your age, sex, race — and others you can change such as:



LOWER YOUR CHANCE of Heart Disease

RISK FACTOR	NORMAL	MY NUMBERS	MY GOAL
Blood Pressure	Less than 120/80		
Cholesterol – Your cholesterol numbers help estimate your chance of having a heart attack or stroke	Total < 200	Total:	Ask your health care professional what your goals should be
	LDL < 100	LDL:	
	HDL > 40 in men > 50 in women	HDL:	
	Triglycerides < 150	Triglycerides:	
Diabetes – Control blood sugar (A1c) to prevent or manage diabetes	A1c ≤ 5.7% If you have diabetes: A1c < 7%		
Weight – Body Mass Index, or BMI	BMI < 25		Lose ____ pounds in ____ weeks
Diet	Eat fruits, vegetables, nuts, whole grains, fish		
Physical Activity	At least 20 minutes of moderate-intensity activity each day		
Stress Level & Social Support	Varies from person to person		

Here are **SOME TIPS TO HELP YOU** eat better, move more, and manage stress.



Eat BETTER

Eat more **FRUITS, VEGETABLES, NUTS, WHOLE GRAINS, FISH OR LEAN MEATS.**

LIMIT OR AVOID	EXAMPLES
 Saturated fat	Red meat, Whole-fat dairy products
 Processed meats	Deli meat, hot dogs, sausages, bacon
 Refined carbohydrates	Candy, cakes and ice cream
 Sugar-sweetened beverages	Soda pop, juices
 Salt	Often found in frozen meals, canned foods, pickles, chips

AVOID TRANS FATS: Read food labels to make sure the food you buy doesn't include **partially hydrogenated oils** and says **"no" trans fats**.

DRINK WATER: Drinking water can help you keep calories in check. Some other beverages are packed with added sugars. Drinks with sugar substitutes can carry health risks.



Move MORE

Adults should get **AT LEAST 150 MINUTES OF MODERATE-INTENSITY EXERCISE OR 75 MINUTES OF VIGOROUS EXERCISE** each week to promote good health. If you can't reach that goal at first, some activity – **EVEN JUST 10 MINUTES AT A TIME** – can help.

INTENSITY	EXAMPLES
Light	Walking slowly, cooking, light housework
Moderate	Brisk walking (2.4 mph-4 mph), ballroom dancing, recreational swimming
Vigorous	Jogging, biking (≥ 10 mph), singles tennis, swimming laps



MANAGE Stress

Too much **STRESS MAY BE HARMFUL TO THE HEART**. Handling stress in a healthy way and staying connected are key to heart health.

DE-STRESS: For some people, taking deep breaths, meditating or yoga can help.

GET ENOUGH SLEEP: Try to get at least seven hours of sleep each night. Not sleeping enough has been linked to a greater risk for heart disease, obesity, and other health issues.

CONNECT MORE: Loneliness has been linked to poorer health. If you have no one to talk to in times of need or feel alone, ask your health care professional about support groups.

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For more information, visit [CardioSmart.org/Prevention](https://www.cardiosmart.org/Prevention)

APPENDIX B

DOCUMENTATION PROTOCOL

How to make sure Nurse Visits are billed appropriately for the work completed:

- The nurse visit 99211 is billable if an LPN/RN completes it.
- Complete dot phrase provided for BP Nurse Visits and include mention of providing education and their plan of care for HTN management
- I routed the patient's blood pressures to the provider for awareness and review and documented that I did this. This can be completed with cosign or route chart with a note in the visit saying, "routing to provider for awareness."
- Any time there is clear and documented communication with the provider about the Plan of Care. For example: "This patient's BPs were over goal. Verbal discussion with PCP who would like to start such and such medication. Plan to check daily home BP's and call us with those numbers in two weeks."
- If a patient is truly coming in for a home BP cuff check and we're just checking it, we cannot bill for it. The pieces that would change this into a billable service: if we're providing good education, documenting following a previous plan set in place by the provider, or routing home readings to a provider for review and clearly documenting this.
- Request Cosign by a provider on all nurse visits: this helps with billing and to track that the provider saw the encounter.
- Verbiage: "Treatment initiated by [Provider]."

Example 1: (RN HTN Clinic visits are often billable)

There was a clear plan of care: "Medication Management"

There was education regarding lifestyle changes

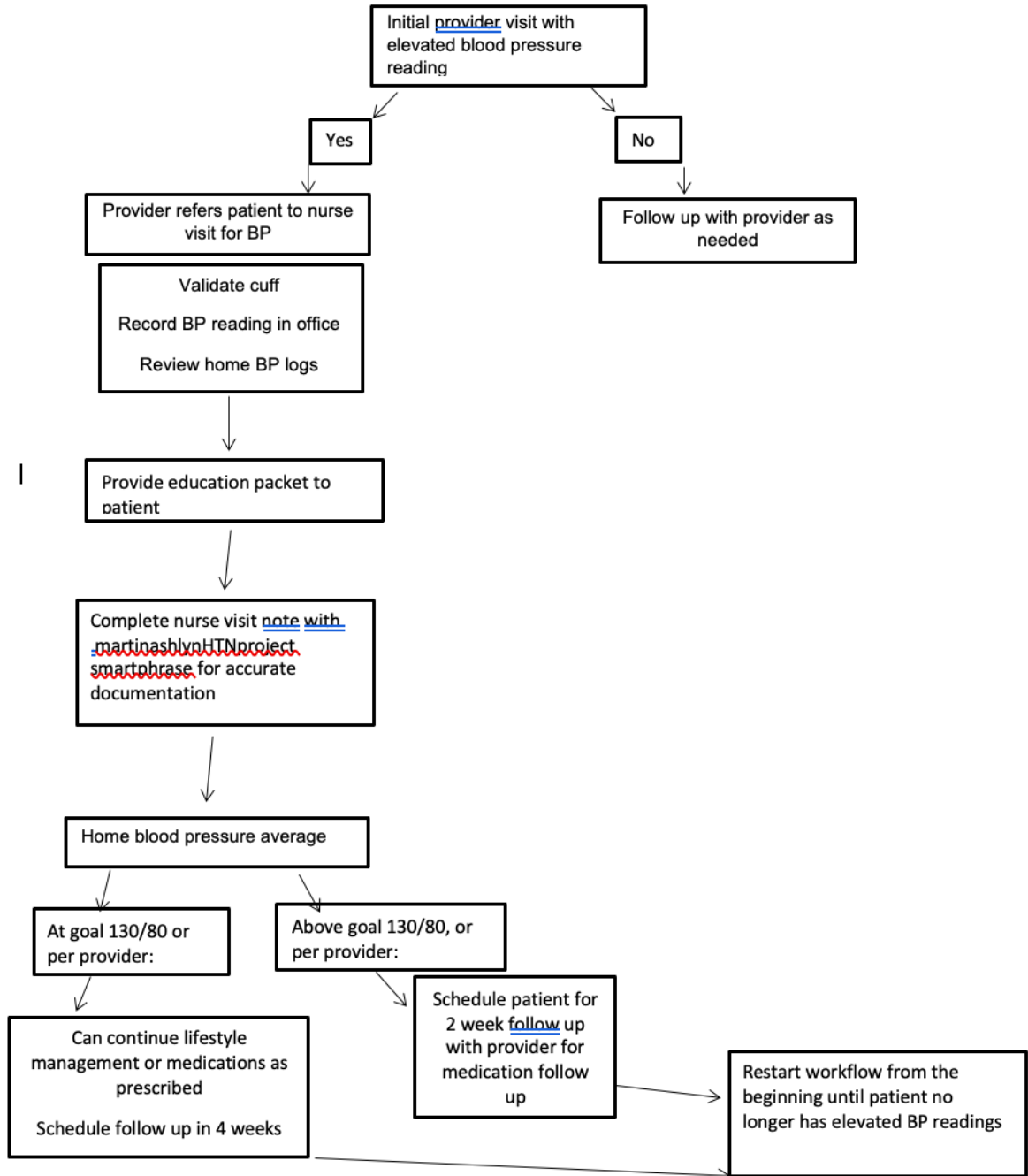
There was a cosign at the bottom by a provider.

APPENDIX C

NURSING WORKFLOW DIAGRAM FOR BLOOD PRESSURE

Workflow for Hypertension Nurse visits

It is best practice for patients with a diagnosis of hypertension to monitor blood pressures at home.



APPENDIX D

DATA COLLECTION TABLE

[illegible]

APPENDIX D

PRE-INTERVENTION NURSE SURVEY

Hypertension Knowledge Survey

Section 1: Self-Assessment Pre-Training

Rating Scale Legend:

- **1 - Very Poor:** Little to no understanding
- **2 - Poor:** Limited understanding
- **3 - Adequate:** Basic understanding
- **4 - Good:** Strong understanding
- **5 - Excellent:** Comprehensive understanding

On a scale of 1 to 5, how would you rate your understanding of hypertension and the importance of education and lifestyle modification in managing it?

	1	2	3	4	5
Please select one:	☐	☐	☐	☐	☐

Section 2: Self-Assessment Post-Training

On a scale of 1 to 5, how would you rate your understanding of hypertension and the importance of education and lifestyle modification in managing it?

	1	2	3	4	5
Please select one:	☐	☐	☐	☐	☐

Thank you for completing this survey.

APPENDIX F

HALFWAY AND FINAL NURSE SURVEY

Hypertension Quality Improvement Project

Evaluation for Nursing Staff

Confidentiality: Your responses are confidential and will be used to improve project implementation only.

Instructions

This survey seeks your valuable feedback as we reach the halfway point of our Hypertension Quality Improvement Project. Your honest input is critical to understanding what's working well and identifying areas for improvement. This is not an evaluation of your individual performance—rather, it's an assessment of the project itself and how it's being implemented in our clinical setting.

Please take time to complete all sections. Your feedback will be compiled with responses from other nursing staff and shared with the project leadership team.

Section 1: Overall Project Progress

1.1 Overall, how do you feel the hypertension QI project is progressing?

- ☐ Excellent—moving forward smoothly with good momentum
- ☐ Good—progressing well with minor challenges
- ☐ Adequate—progressing but facing some obstacles

- ☐ Problematic—facing significant challenges
- ☐ Unsure—uncertain about project status

1.2 In what ways do you think the project is going well? (Please describe.)

Section 2: Questions, Concerns, and Barriers

2.1 What questions do you have about the hypertension QI project at this midpoint?

2.2 What concerns do you have about the project? (Examples: unclear expectations, resource constraints, workflow disruptions, patient acceptance, sustainability)

2.3 What barriers or obstacles are you encountering in implementing the project? (Rate your agreement)

Barrier	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Insufficient time to complete all project components during patient visits	☐	☐	☐	☐	☐

Unclear documentation requirements or processes	☐	☐	☐	☐	☐
Lack of training or resources to support implementation	☐	☐	☐	☐	☐
Electronic health record (EHR) technical issues or navigation challenges	☐	☐	☐	☐	☐
Patient resistance or low engagement with hypertension education	☐	☐	☐	☐	☐
Workflow conflicts with existing clinical processes	☐	☐	☐	☐	☐
Unclear communication about project changes or updates	☐	☐	☐	☐	☐

Section 3: Documentation and Implementation

3.1 How would you rate your experience with documenting the hypertension QI project components? (Select one)

- ☐ Very easy—clear processes and tools

- ☐ Somewhat easy—minor challenges
- ☐ Neutral—some clear parts, some confusing
- ☐ Somewhat difficult—multiple challenges
- ☐ Very difficult—significant documentation barriers

3.2 Please describe any specific documentation challenges you're experiencing:

3.3 Do you feel the documentation requirements are:

- ☐ Excessive—taking too much time away from patient care
- ☐ Appropriate—manageable within my workflow
- ☐ Insufficient—not capturing enough information
- ☐ Unsure

3.4 How often are you successfully documenting the hypertension education you provide?

- ☐ 90-100% of the time (almost always)
- ☐ 70-89% of the time (most of the time)
- ☐ 50-69% of the time (about half the time)
- ☐ 30-49% of the time (less than half)
- ☐ Less than 30% of the time

What factors are preventing 100% documentation? _____

Section 4: Educational Packet Distribution and Patient Response

4.1 How often are you distributing the hypertension educational packet to patients during your

NURSE visits?

- ☐ Every patient with hypertension (100%)
- ☐ Most patients with hypertension (75-99%)
- ☐ Some patients with hypertension (50-74%)
- ☐ Few patients with hypertension (25-49%)
- ☐ Rarely or never (<25%)

4.2 How often are you distributing the hypertension educational packet during PROVIDER visits with patients?

- ☐ Every patient with hypertension (100%)
- ☐ Most patients with hypertension (75-99%)
- ☐ Some patients with hypertension (50-74%)
- ☐ Few patients with hypertension (25-49%)
- ☐ Rarely or never (<25%)
- ☐ Unsure/not observed

4.3 What factors influence your decision to distribute (or not distribute) the educational packet?

(Select all that apply)

- ☐ Patient time constraints (visit length)
- ☐ Patient literacy level or language barriers
- ☐ Patient receptiveness to education
- ☐ Uncertainty about when packet should be given
- ☐ Forgetting or not having packets readily available
- ☐ Believing another staff member already provided education
- ☐ Patient already has the packet from a previous visit
- ☐ Clinical complexity of the patient's condition
- ☐ Other: _____

4.4 How would you rate the quality and usefulness of the hypertension educational packet for patients?

- ☐ Excellent—clear, engaging, appropriate for our patient population
- ☐ Good—generally useful with minor limitations
- ☐ Adequate—somewhat useful but could be improved
- ☐ Poor—needs significant revision
- ☐ Unsure

4.5 Based on patient feedback or your observations, how are patients responding to the educational packet? (Describe)

4.6 Have you observed changes in patient engagement or understanding related to hypertension management since receiving the educational packet?

- ☐ Yes, significantly improved engagement/understanding
- ☐ Yes, slightly improved engagement/understanding
- ☐ No noticeable change
- ☐ Mixed results—some patients engaged, others not
- ☐ Unsure

Please explain: _____

Section 5: Suggested Changes and Improvements

5.1 What changes would you make to the hypertension QI project at this midpoint? (Please be specific)

5.2 Are there specific elements of the project that should be changed:

Element	Keep As Is	Modify	Eliminate	Unsure
Educational packet content and format	☐	☐	☐	☐
Documentation process/template	☐	☐	☐	☐
Frequency of hypertension screening/assessment	☐	☐	☐	☐
Nurse vs. provider roles in education delivery	☐	☐	☐	☐
Patient follow-up process	☐	☐	☐	☐

5.3 What resources or support would help you implement this project more effectively?

5.4 Are there any best practices or workarounds you've developed that should be shared with the team?

Section 6: Project Sustainability and Buy-In

6.1 How confident are you that this hypertension QI project will be sustained long-term?

- ☐ Very confident—this will become standard practice
- ☐ Somewhat confident—likely to continue with some effort
- ☐ Neutral—uncertain about sustainability
- ☐ Somewhat doubtful—may face implementation challenges
- ☐ Very doubtful—uncertain if it will continue

6.2 To what extent do you support the goals and objectives of this hypertension QI project?

- ☐ Strongly support—believe it will improve patient outcomes
- ☐ Support—think it's worthwhile with some reservations
- ☐ Neutral—see merit but have concerns
- ☐ Skeptical—have significant concerns
- ☐ Opposed—do not support the project

Please explain: _____

Section 7: Additional Comments

7.1 Is there anything else you'd like the project leadership team to know about your experience with the hypertension QI project so far?

7.2 How can we best support you in successfully implementing the remainder of this project?

Thank You

Thank you for taking the time to complete this survey. Your feedback is invaluable and will directly inform our decisions about project modifications and the next phase of implementation.