

Current and Potential Roles of Public Health Nurses in Hypertension Prevention and Control



Background on Hypertension Control and Prevention in the U.S.

Uncontrolled hypertension affects 36 million people in the United States. Of those individuals, 14.1 million remain undiagnosed and 5.7 million have diagnosed but unmanaged hypertension, totaling almost 20 million Americans with elevated risk for heart attack and stroke.¹ The U.S. government has responded to this problem with multiple initiatives, including [Healthy People 2020 targets for Hypertension](#) and the [National Prevention Strategy's](#) commitment to “identify, pilot, and support strategies that reduce cardiovascular disease.”² In addition, the [Community Preventative Services Task Force](#) has recommended “team-based care” to improve blood pressure control, based on 80 studies citing its clinical and financial effectiveness. Such teams are usually led by nurses and pharmacists who work with primary care and other providers and patients.³

In September 2011, the Centers for Disease Control and Prevention (CDC) and Centers for Medicare and Medicaid Services (CMS) launched the [Million Hearts Initiative](#) with the goal of preventing one million heart attacks and strokes by 2017 using the “ABCS” model (Aspirin use for people at risk for cardiovascular disease, Blood pressure control, Cholesterol management, and Smoking cessation).¹ Through national, state, and local efforts, the initiative has reached the 53% mark toward the 65% 2017 target in blood pressure control.¹ In October 2013, ASTHO launched a [State Learning Collaborative](#) with CDC support to help 10 state health departments work together to implement best practices and integrate public health and healthcare to address hypertension.⁴

Prevention and control of hypertension must address both social determinants of health and lifestyle changes, which cannot be managed through clinical care alone. Partnerships between public health and health care are essential to promoting the ABCs and changing the context of health culture. The Million Hearts Initiative provides an opportunity for community and public health nurses (PHNs) to contribute to the goal of preventing one million

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Heart Disease & Stroke are the Leading Killers of Adults in the United States

- Cause of one in every three deaths.
- More than two million heart attacks and strokes occur in the U.S. each year.
- Greatest contributor to racial disparities in life expectancy.



Public Health Nurses: Partner in Addressing Heart Disease and Stroke in the United States

- Public health nurses make up the largest percentage of both the public health and healthcare provider workforce.
- Focus on prevention, social determinants of health, and care of populations.
- Tools: community assessment, partnerships, and data analysis.

heart attacks and strokes in the next three years. This Issue Brief will identify PHN teams within ASTHO's 10 state teams and other states, provide examples of PHNs' roles and effectiveness in preventing and controlling hypertension, consider funding models for hypertension prevention, and provide recommendations for PHNs' ongoing involvement in chronic disease management.



Current and Potential Roles of Public Health Nurses in Hypertension Prevention and Control



Evidence of Public Health Nurses' Effectiveness in Hypertension Prevention and Control

Managing chronic conditions necessitates practice change. Ten years ago, CDC Director Thomas Frieden, MD, MPH, commented that local health departments were successfully monitoring and controlling diseases that killed Americans 100 years ago, but seemed to be “asleep at the switch” regarding what is killing us now—chronic disease.⁶ Given increasing numbers of individuals with undiagnosed or uncontrolled hypertension in the United States, how can PHNs be involved in the prevention and control of hypertension?

Nurses comprise the largest group of occupational public health workers in the United States, and their strong prevention- and population-focused training makes PHNs ideal partners in health promotion and disease prevention initiatives.⁷ One of the recommendations to come out of the 2012 Robert Wood Johnson Foundation Future of Public Health Nursing Forum was to expand the evidence base for public health nursing practice.⁸ Evidence-based models in public health nursing began in the 1990s with two notable programs, the [Nurse-Family Partnership](#), which supports low-income, first time mothers and their babies, and [Directly Observed Therapy](#) for patients with tuberculosis.⁹ Both models have proven success at the population level and are foundational to the evolving roles of public health nursing in home visitation and case management for patients with hypertension.

Community and PHNs are using the national Million Hearts initiative as a framework to assess and respond to the needs of populations with the greatest risk and highest burden of hypertension at state and local levels. Through new or strengthened partnerships between public health and primary care providers, community and PHNs have taken on a variety of new roles in hypertension prevention and control to creatively and effectively impact underserved populations who face medical, financial, racial, and accessibility disparities.



“It is essential to emphasize collaboration and partnerships with communities and populations as contemporary PHN roles evolve in the context of Healthy People 2020, the Patient Protection Affordable Care Act, and the National Prevention, Health Promotion, and Public Health Council. These national initiatives provide new opportunities for emerging roles in PHNs focused on community health promotion and prevention practices.”

-Kulbok, Thatcher, Park & Meszaros⁵

Blood Pressure Screenings & Monitoring

PHNs in rural Randolph-Elkins County, West Virginia offer blood pressure screenings for clients who attend local family planning and breast and cervical clinics. Similarly, PHNs in Nashua County, New Hampshire offer blood pressure screenings for walk-in patients in conjunction with immunization and HIV/STI clinics, and plan to expand screening availability in the county via a public health van. Parish Nurses in Washington County, Maryland set a goal of providing screenings to 1,000 parishioners within their network of 52 faith communities by June 30, 2014. PHNs from New York's Dutchess County Department of Health are dispensing home blood pressure monitors to patients with hypertension in coordination with Hudson River HealthCare's Beacon [Federally Qualified Health Center \(FQHC\)](#). In St. Paul, Minnesota, the state health department partners with four local clinics to help PHNs provide home blood pressure monitoring for hypertensive patients.



“We need public health nurses to be ‘bridge people’—to connect the clinical with the community.”

-Sara Eve Sarliker, MPH, manager,
Community-Clinical Linkages Program,
Washington State Department of Health



Current and Potential Roles of Public Health Nurses in Hypertension Prevention and Control



Care Coordination

A PHN at the local health department in Peoria, Illinois is the project manager and primary contact with the faith community nurses, serving as a navigator and case manager for patient referrals and ensuring that clients make their appointments.

The Oklahoma State Department of Health's [Heartland Project](#) has a team-based model that incorporates a PHN care coordinator who has developed new referral, documentation, and reporting protocols and program graduation criteria to assist the hypertensive population in southeastern Oklahoma, including patient selection criteria, a patient referral process, designated responsibilities for the healthcare team, blood pressure measurement procedures, documentation and reporting forms, and graduation criteria. Better communication between PHNs and clinicians has resulted in medication changes and improved blood pressure readings for two clients who otherwise would not be recognized or addressed until their next physician visit.

Summit County, Ohio is specifically targeting hypertension in its African-American male population: PHNs in the Care Coordination Unit receive patient referrals from 11 primary care clinics and provide follow-up treatment, including a home visit to assess the living situation, medication adherence, and blood pressure. The Care Coordination Unit has received and followed up on 28 referrals. Outcomes show that the program's 7,300 hypertensive clients have moved from 69.7 percent to 73.4 percent controlled, and 68.8 percent of patients schedule a follow-up appointment.

Counseling/Coaching

Washington County, MD's local health department has partnered with Meritus Health's Parish Nurse Program to help control hypertension in the county. As of March 2014, Meritus Health had trained 22 parish nurses to coach parishioners on blood pressure self-monitoring and lifestyle changes, and the nurses recruited and met with 53 parishioners with hypertension in April 2014. New protocols developed by PHNs in the Oklahoma Department of Health have connected clients in their Heartland Project to tobacco cessation, healthy lifestyle, and nutritional counseling services.



Key Roles of Public Health Nurses in the Prevention and Control of Hypertension

- **Blood pressure screening and monitoring:** build community members' knowledge and awareness of screening and its impact on health.
- **Care coordination:** reduce fragmented care and provide greater follow-up.
- **Counseling/coaching:** guide community members to set and meet their own health goals.
- **Data collection:** provide a "snapshot" of the population affected by hypertension and help providers target interventions.
- **Developing protocols and making referrals:** ensure standard practices and determine patient and provider roles.
- **Patient or provider education:** inform patients about their blood pressure and how they can make lifestyle changes to prevent or improve hypertension.
- **Self-management education:** allow referral to peer-led, community-based programs that build self-efficacy and teach symptom-management skills.

Data Collection

Dutchess County, New York PHNs have developed and administered a survey for clients with hypertension at their partnering FQHC that asks patients about their barriers to healthcare and preferred methods of education delivery. Preliminary results from the initial survey in April 2014 discussing patients' preferred method of learning to take their own blood pressure yielded responses from 60 patients, with a majority noting a preference for one-to-one education in the physician's office.



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Developing Protocols and Making Referrals

Nashua County, New Hampshire has developed a protocol to refer HIV/STI clinic patients with elevated blood pressure to their primary care physicians or the Lamprey FQHC. Oklahoma Department of Health's Heartland Project has developed protocols to include patient selection criteria, a referral process, responsibilities of team members, blood pressure measurement procedures, documentation and reporting forms, and graduation criteria. In Summit County, Ohio, PHNs making home visits loop back to the physician to assure connection to the clients' medical home. In St. Paul, Minnesota, PHNs help primary care clinics develop and implement protocols related to blood pressure control. One of these clinics, which serves 950 patients, has had four of its ten providers refer patients to the program, and this collaboration has produced new protocols for patient education, monitoring, documentation, and follow-up in addition to creating new tools for patients and providers.

Patient or Provider Education

In the District of Columbia Department of Health's [Healthy Start](#) program, nurses educate new mothers about reducing their risk of hypertension. PHNs in the Dutchess County Department of Health have developed a four-module health education program, based on Nola Pender's [Health Promotion Model](#), for patients in their Million Heart project. As of March 2014, Meritus Health's Parish Nurse Program has trained 41 nurses to educate and screen more than 5,000 parishioners and 22 nurses to coach 53 parishioners with hypertension on blood pressure self-monitoring and lifestyle changes. Similarly, in Peoria, Illinois, PHNs in the City-County Health Department are working with faith community nurses from five local churches in the target area on a program to guide church members toward a heart-healthy lifestyle. Faith community nurses work with lay leaders at churches to conduct blood pressure screenings and provide education and support to congregation members. PHNs in Randolph-Elkins County, West Virginia plan to expand the blood pressure screenings offered in their family planning and breast and cervical clinics to include more health education. In Stephenson County, Illinois, health department nurses in the [Well Woman](#) and [WISEWOMAN](#) programs educate patients about hypertension risk by

discussing lab values, healthy eating, and physical activity. In addition, PHNs in Summit County, Ohio provide patient education during home visits to patients with hypertension.

Self-Management Education

The Illinois Department of Public Health's Healthy Hearts project is working with a FQHC to assess and identify individuals with both hypertension and behavioral health concerns who may or may not already be clients of the FQHC. Once connected to the FQHC, patients are referred for community-based self-management education, self-monitoring training, and blood pressure monitoring by clinic staff. Project funds have allowed three staff members from the Macon County Health Department to become certified trainers in the Stanford Chronic Disease Self-Management Program and for the distribution of home blood pressure monitors by the FQHC and local health department.

Addressing Hypertension in Health Plans

Aetna's Chief Nursing Officer, Susan Kosman, MS, BSN, RN, shares the variety of opportunities for nurses to address the needs of those with hypertension and other chronic health problems within their network of 22 million members. PHNs working in state and local agencies have an opportunity to partner with nurses in clinical care settings, managed care organizations, and in particular, other public and private payer organizations, to improve patient care. While this work provides potential roles for nurses to work with patients with chronic disease at the population level, there is also a need for PHNs to identify ways to coordinate and engage with private and public payers. As payers, health plans work largely with primary or acute care providers and hospital health systems to serve the needs of their members. PHNs must connect with and describe the opportunities for payers to be involved with the health of the greater community, which will ultimately impact the health of the plan's membership. The New York Department of Health is beginning to cultivate sustainable partnerships with healthcare plans by promoting the sharing of information with providers to improve hypertension management. The department discussed how data and benefits could be leveraged to improve care and outcomes.



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Funding the Prevention of Hypertension

The ACA's passage in 2010 has provided an impetus for changing healthcare reimbursement from a fee for service model to an outcome reimbursement model. Although the ACA's recent focus has been on enrollment efforts, the law also provides an opportunity to transform the provision of care into the promotion of health.^{11,12} While opportunities exist, how to fund prevention and population health remains a missing piece.¹²

One potential move toward funding prevention is the idea of a "Community Health System" that is accountable for the health of a geographic region rather than a patient population.¹¹ This infrastructure is evolving with the shift from [Accountable Care Organizations \(ACOs\)](#) to Accountable Care Communities (ACCs), where providers recognize the need to understand environmental and social factors impacting patients' health and dollars saved by ACOs are set-aside for community prevention efforts.¹² One Akron, Ohio ACC is being developed through a collaborative of healthcare providers, local government agencies, and community-based organizations.¹² Similarly, Nationwide Children's Hospital in Columbus, Ohio has invested community-benefit funds into its [Healthy Neighborhoods, Healthy Families](#) program to addressing housing, food access, education, safe neighborhoods, and economic and workforce development issues.¹² Such models provide system changes that are more inclusive of community efforts aimed at prevention, allowing more opportunities for PHNs to participate.

PHNs play a critical role in advocating for policy change to fund community-based efforts aimed at chronic disease control. In Olympia, Washington, nurse and office chief of the Chronic Care, Well Being and Performance Improvement Unit of the Aging and Long Term Support Administration is working to create greater sustainability for the state-wide [Chronic Disease Self-Management Program \(CDSMP\)](#). Since its inception in 2008, the program has grown to 200 implementation sites, 50 host organizations, and 5,000 total participants. Washington's [Home and Community-Based Service \(HCBS\) waivers](#) define services



"With the ACA, all eight million of these newly insured persons are in health plans. Some states have expanded Medicaid, [and] more families now have healthcare coverage. This is not traditional public health, I know, but the focus of this population health arena is disease prevention and health promotion. I see quite an emphasis on health in the community, prevention, not a hospital focus. You can change the focus to 'upstream' — put the impact on where people live, work, and play; not the hospital. I see this as a vast and challenging opportunity to impact population health. You could work with low income populations or elderly or children with special healthcare needs or adults with chronic diseases. So, there are jobs in population health. Look beyond traditional public health agency postings."

-Trish O'Day, MSN, RN, Clinical Nurse Specialist, The University of Texas at Austin

and personal care that those eligible for Medicaid Long Term Services and Supports (LTSS) can receive, and for the past few years, Washington's HCBS waiver has six weeks of session fees for Medicaid-eligible participants in CDSMP. Additionally, the nurse and Office Chief is introducing CDSMP as a service reimbursable by CMS with five healthy options managed care organizations providing health services to Medicaid beneficiaries and is working with the Medicaid fee-for-service division within the state's healthcare authority to understand how to work with Medicaid funding to allow payment for peer-led health programs like CDSMP.



Current and Potential Roles of Public Health Nurses in Hypertension Prevention and Control



Conclusion & Recommendations

PHNs in the Million Hearts state teams are seeing positive outcomes from their partnerships with primary care and other community partners whether they are incorporating interventions into existing programs or starting new programs. The most productive collaborations occur when stakeholders “have clearly defined roles that leverage expertise and capacity,” according to the National Academy for State Health Policy.¹³ Community and PHNs’ clinical skills, prevention focus, community assessment tools, and strong linkages to their communities are vital to populations with or at risk for uncontrolled hypertension. Capacity must be defined in the context of what is “killing us now—chronic disease.”⁶ Hypertension management is a critical issue in the United States, but it provides an opportunity to focus on prevention and early identification of at-risk populations. While the traditional functions of local and state health departments remain, the lack of funding for and growing numbers of patients with hypertension are calls to action. It is the responsibility of PHNs, working as one voice, to expand their collective expertise in prevention and care of populations in partnership with healthcare delivery leaders.

In collaboration with public health teams and healthcare service providers, PHNs in the Million Hearts state teams serve various roles in screening, care coordination, counseling/coaching, data collection, developing protocol development and patient referral, and patient education. The Association of Public Health Nurses (APHN) recommends that PHNs consider how they can address hypertension prevention and control in their communities through practice change by creating and cultivating partnerships with primary care and community organizations. Next steps should include collecting and sharing results so that others may replicate promising practices. PHNs can help promote practice change, build partnerships, and improve patient outcomes through a strategic focus on hypertension as a funding priority tied to patient outcomes measurement. This will help build best practices and greater collaboration within the healthcare system. Finally, public health organizations such as ASTHO, APHN, the Association of Community Health Nurse Educators, and the American Public Health Association can assist in these efforts by educating public health and healthcare professionals through national webinars, conferences, and state project initiatives dissemination, and identifying hypertension prevention-focused evidence-based practices.

References

1. Wright, J. (2014). “All about Million Hearts: Preventing a million together.” Presented at District of Columbia Department of Health Million Hearts Meeting.
2. U.S. Department of Health and Human Services. “National Prevention Council Action Plan: Implementing the National Prevention Council action plan.” Available at <http://www.surgeongeneral.gov/initiatives/prevention/2012-npc-action-plan.pdf>.
3. Community Preventive Services Task Force. “The Community Guide: Cardiovascular disease prevention and control: Team-based care to improve blood pressure control.” Available at <http://www.thecommunityguide.org/cvd/teambasedcare.html>.
4. Association of State and Territorial Health Officials. “State Learning Collaborative to Improve blood pressure control.” Available at <http://astho.org/Million-Hearts/State-Learning-Collaborative-to-Improve-Blood-Pressure-Control/>.
5. Kulbok PA, Thatcher E, Park E, Meszaros PS “Evolving public health nursing roles: Focus on community participatory health promotion and prevention.” *Online Journal of Issues in Nursing*. [serial online]. 2012. Issue 2.
6. Frieden, TR (2004). “Asleep at the switch: Local public health and chronic disease.” *American Journal of Public Health*. 2004. 94(12):2059-2061.
7. Robert Wood Johnson Foundation. “Enumeration and characterization of the public health nursing workforce.” Available at <http://www.rwjf.org/content/dam/farm/reports/reports/2013/rwjf406659>.
8. Robert Wood Johnson Foundation. “Forum on the future of public health nursing: Proceedings and feedback: Summary report.” Available at <http://www.rwjf.org/content/dam/farm/reports/reports/2012/rwjf404144>.
9. Robert Wood Johnson Foundation. “Charting Nursing’s Future: Policies and programs that recognize nursing’s role in assuring the public’s health.” Available at http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2008/rwjf32665.
10. CDC “Practical playbook.” Available at <https://practicalplaybook.org/>.
11. Institute of Medicine. “A sustainable financial model for community health systems.” Available at <http://www.iom.edu/Home/Global/Perspectives/2014/SustainableFinancialModel.aspx>.
12. Prevention Institute. “How can we pay for a healthy population? Innovative new ways to redirect funds to community prevention.” Available at <http://www.preventioninstitute.org/component/jlibrary/article/id-332/127.html>.
13. National Academy for State Health Policy. “Financing prevention: How states are balancing delivery system and public health roles.” Available at <http://nashp.org/sites/default/files/Financing.Prevention.pdf>.



Appendices

APPENDIX A: Washington County, Maryland Tool: Model for Healthy Blood Pressure

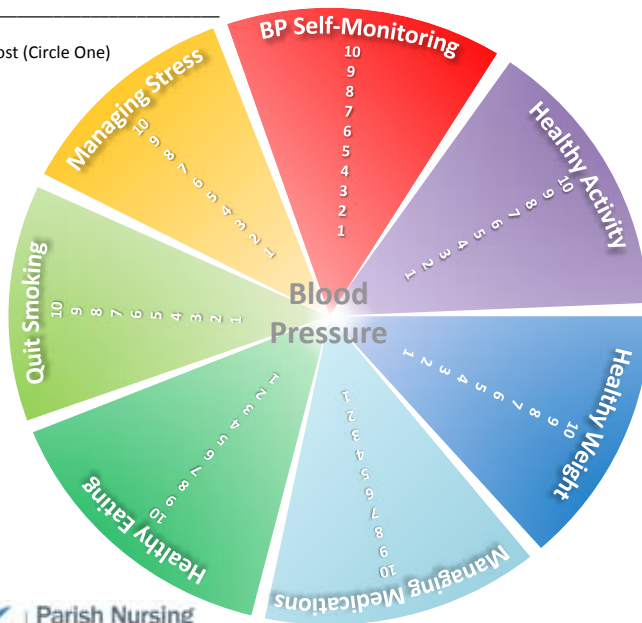
Model for Healthy Blood Pressure

Circle the number on the wheel that best describes your satisfaction in each of these areas (1 – unsatisfied, 10 – completely satisfied). Connect the circles. What areas would you like to improve?

Name: _____

Date: _____

Pre or Post (Circle One)



This publication was adapted, with permission, from the Model for Healthy Living, designed by the Church Health Center, Memphis Tennessee, www.churchhealthcenter.org/fcnhome.

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BP Self-Monitoring

Regularly taking your blood pressures at home or at your pharmacy.

1 2 3 4 5 6 7 8 9 10

Healthy Activity

Finding ways to move around and meet activity guidelines.

1 2 3 4 5 6 7 8 9 10

Healthy Weight

Maintaining a recommended weight.

1 2 3 4 5 6 7 8 9 10

Managing Medications

Taking your medications as prescribed.

1 2 3 4 5 6 7 8 9 10

Healthy Eating

Reducing salt intake and eating more fruits and vegetables.

1 2 3 4 5 6 7 8 9 10

Quit Smoking

Staying away from cigarettes and tobacco products.

1 2 3 4 5 6 7 8 9 10

Managing Stress

Reduce the amount of stress in your life and/or find ways to ensure it does not affect you as much.

1 2 3 4 5 6 7 8 9 10

This Model for Healthy Blood Pressure was adapted with permission from the Wellness Wheel designed by the Church Health Center in Memphis, Tennessee. It is currently used by the Meritus Parish Nurse program in Washington County, Maryland.

APPENDIX B: Summit County, Ohio Public Health Referral Form See following page

APPENDIX C: Peoria, Illinois City-County Million Hearts Newspaper Ad

<http://www.phnurse.org/images/docs/hearts/NewspaperAd-Peoria.pdf>



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APPENDIX B:
Summit County, Ohio Public Health Referral Form



Summit County Public Health Referral

Please fill out and return to the Summit County Public Health Care Coordination Unit

Client Information

Full Name: _____
 DOB: _____
 Phone: _____
 Address: _____

Reason for Referral:

Doctor Information

Name of Practice: _____
 Referring Physician: _____
 Address: _____
 Phone: _____
 Fax: _____ Date: _____

Please fax or email to the Summit County Public Health Care Coordination Unit
 FAX: (330) 923-6370 PHONE: (330) 926-5660

Please identify the types of assistance the client may need:

- Food
- Medical Services
- Utilities
- Dental Services
- Vision Services
- Pap/Mammogram Services
- Prescription Assistance
- Housing
- Transportation
- Appendix B: Summit County, OH Public Health Referral Form, continued
 - Senior Services
 - Counseling
 - Other (Specify):

Client gave verbal consent to be contacted on: (date) _____ Provider Initials: _____