

Advance Nurse Practitioner Hypertension Management

Mary Jane Alcantara Venzon, MSN AGPCNP-BC, AGPCNP-C, CWCN, ARNP
University of Cincinnati, College of Nursing

BACKGROUND

- ❑ Hypertension accounted for 38.9 million visits to physician ambulatory clinic in 2010
- ❑ About 30% of hypertensive patients with increased awareness continues to have uncontrolled hypertension
- ❑ Under the physician-led hypertension management, blood pressure (BP) control remains below the 50% target goal of the government's Healthy People 2010 initiative
- ❑ Nurse practitioners (NPs) presence in primary care is increasing especially in the chronic disease management including essential hypertension
- ❑ NPs must demonstrate excellent clinical performance and improve patient outcomes
- ❑ Despite of multiple research studies proving that NPs provide cost-effective high-quality care, there are still limitations on NPs scope of practice throughout the country

PURPOSE

- ❑ Evaluate the effectiveness of NPs hypertension management compared to physician management in achieving BP control in primary care setting
- ❑ Understand the role of NPs in primary care setting

METHODS

Review of literature was conducted within the last 5 years from 2009 to 2014. Search review was limited to peer reviewed, evidence-based research, and research articles with English language content. Cumulative Index to Nursing and Allied Health Alliance (CINAHL), Cochrane, and PubMed databases were searched. Included studies were limited to primary care setting in the United States involving NPs or advanced practice nurse in hypertension management among hypertensive adult ages between 20 to 64 years old . Four articles were deemed appropriate and selected. Studies were appraised using the standard critical appraisal form from the Cincinnati Children's Evidence Collaborative which will guide the study's level and quality of evidence.

TERMS

Hypertension is a systolic blood pressure of equal or more than 140 mmHg or a diastolic pressure of equal or more than 90 mmHg.

RESULT

All of the 4 included studies reported that BP control with the NP-led hypertension management is comparable to the physician-led management.

Figure 1 NP vs MD BP Control

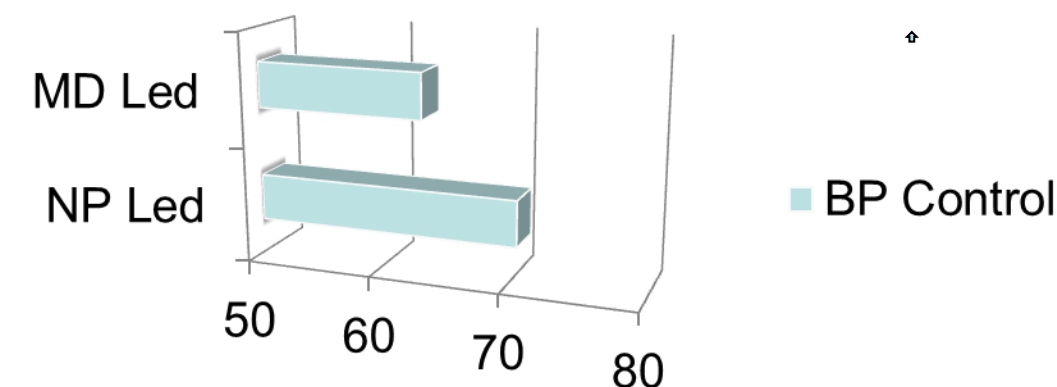


Figure 2 Improvement in Blood pressure in NP Hypertension Management

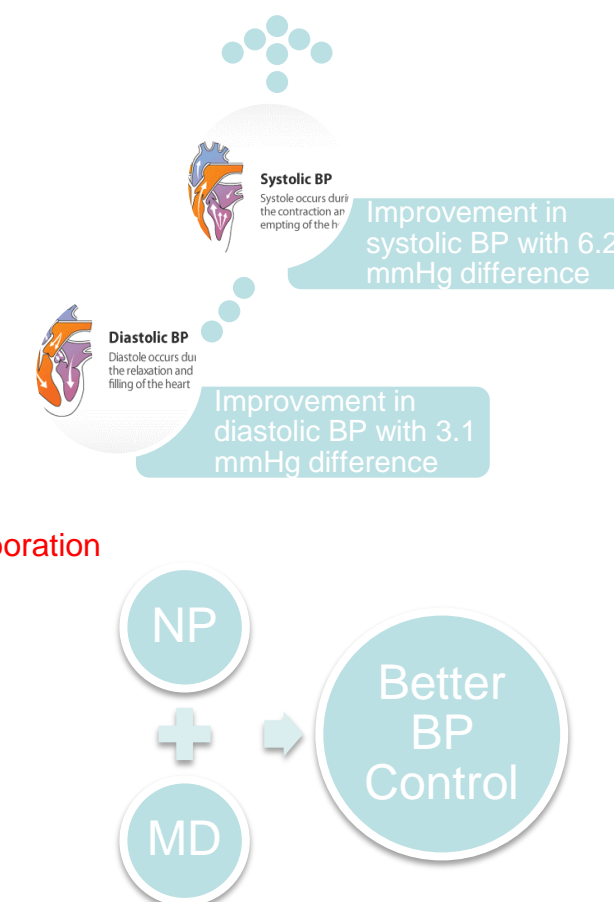


Figure 3 Collaboration

SUMMARY

- ❑ NPs provide high quality level of patient care that yield better outcome
- ❑ NPs practice in the area of hypertension management, with or without physician collaboration, achieved equivalent or better outcomes compared to physicians
- ❑ NP has a key role in prevention, early detection, and management of hypertension

LIMITATIONS

- ❑ Limited number of studies available in the literature of NP hypertension management
- ❑ Limited studies of NPs working independently

IMPLICATIONS

- ❑ The overlapping responsibilities of NPs and MDs cause unnecessary utilization of health care resources
- ❑ Giving NPs full of authority to practice will be cost-effective and will increase available providers in underserved and rural areas
- ❑ Cost effective care will reduce economic burden from the patient and from the nation
- ❑ Evidence support the NPs full scope of authority
- ❑ Political barriers that hinder the expansion of NPs scope of practice should be addressed in state and federal laws

REFERENCE

- Allen, J. K., Dennison-Himmelfarb, C. R., Szanton, S. L., Bone, L., Hill, M. N., Levine, D. M.,...Anderson, K. (2011). Community outreach and cardiovascular health (COACH) trial: A randomized, controlled trial of nurse practitioner/community health worker cardiovascular disease risk reduction in urban community health centers. *Circulation Cardiovascular Quality Outcomes*, 4, 595-602. doi:10.1161/CIRCOUTCOMES.111.961573
- Centers for Disease Control and Prevention. (2012). Vital Signs: Awareness and treatment of uncontrolled hypertension among adults — United States, 2003–2010. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6135a3.htm?s_cid=mm6135a3_w
- Cincinnati Children's Hospital Medical Center. (2014). Evidence Evaluation Tools & Resources (LEGEND). Retrieved from <http://www.cincinnatichildrens.org/service/j/anderson-center/evidence-based-care/legend/>
- Daugherty, S. L., Masoudi, F. A., Ellis, J. L., Ho, P. M., Schmittiel, J. A., Tavel, H. M.,...Magid, D. J. (2011). Age-dependent gender differences in hypertension management. *Journal of Hypertension*, 29(5), 1005-1011. doi:10.1097/HJH.0b013e3283449512
- DeSimone, M. E., & Crowe, A. (2009). Nonpharmacological approaches in the management of hypertension. *Journal of the American Academy of Nurse Practitioners*, 21(4), 189-196. doi:10.1111/j.1745-7599.2009.00395.x
- Newhouse, R. P., Stanik-Hutt, J., White, K. M., Johantgen, M., Bass, E. B., Zangaro, G.,...Weiner, J. P. (2011). Advance practice nurse outcomes 1990-2008: A systematic review. *Nursing Economics*, 29(5), 1-21. Retrieved from <http://www.nursingeconomics.net/ce/2013/article3001021.pdf>
- Wright, W. L., Romboli, J. E., DiTulio, M. A., Wogen, J., & Belletti, D. A. (2011). Hypertension treatment and control within an independent nurse practitioner setting. *American Journal of Managed Care*, 17(1), 58-65. Retrieved from http://www.ajmc.com/publications/issue/2011/2011-1-vol17-n1/AJMC_2011jan_Wright_58to65/