RN/MD Team-based Care Pilot: Improving Hypertension Management

The Problem

Hypertension is one of the most common medical conditions and is an independent risk factor for cardiovascular disease[1]. Clinical studies have demonstrated that medical therapy of hypertension reduces cardiovascular events and improves mortality.

- Despite this, recent studies estimate that only approximately 50% of patients with hypertension are controlled (as defined as having a blood pressure less than 140/90).[2]
- Recent publications have highlighted significant success in better controlling chronic diseases such as hypertension using a team-based approach.[3]
- Across Healthcare Associates, 56.3% of patients with hypertension have their blood pressure at target.

Aim/Goal

Develop an RN/MD team to provide comprehensive care for patients with hypertension including:

- Enhance patient understanding of lifestyle interventions that can impact blood pressure and develop individualized plans that they can incorporate into their daily lives
- Empower patients to better understand their own blood pressure readings with use of home blood pressure monitors and blood pressure logs to track trends and identify high readings
- Improve patient adherence to hypertension medication and other lifestyle changes, including weight loss
- Improve blood pressure readings for patients in pilot to target a goal blood pressure < 140/90 within two office visits
- Follow patients after discharge from the Hypertension Clinic to determine if participation results in continued blood pressure control

The Team

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Scot Sternberg, MS, Medicine QI
Kristine Sullivan, RN, General Medicine
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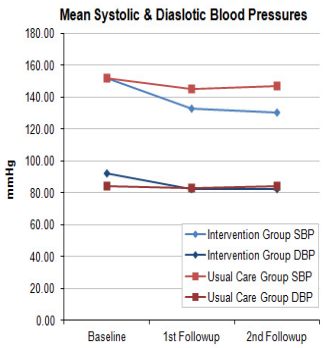
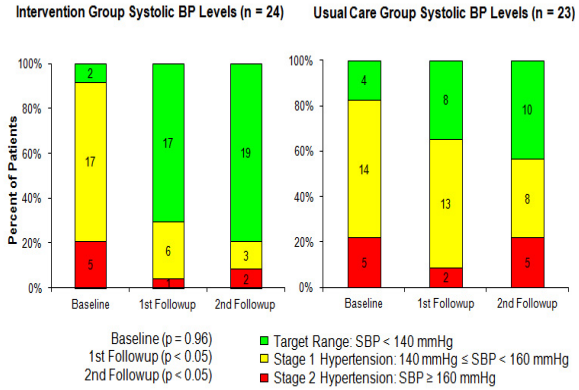
The Interventions

- Patients with poorly controlled hypertension were referred for an office visit in the RN/MD Hypertension Clinic
- RN interviewed and assessed each patient to understand their knowledge of hypertension and lifestyle factors that could affect their blood pressure
- RN provided personalized counseling and written educational materials based on initial assessment
- MD met with RN and patient after initial assessment was performed and made medication adjustments if indicated based on blood pressure readings
- RN provided exit counseling specific to any medication changes made (i.e. side effects) and encouraged patient to identify goals for their diet and their activity level
- Follow-up visit was scheduled for 2-4 weeks, depending on blood pressure readings and patient was reassessed at that time

The Results/Progress to Date





There were 24 patients enrolled in the pilot and 23 control patients managed per usual care. Patients were followed for approximately 3 months and outcomes were as below

- Baseline blood pressures were 152/92 (RN/MD clinic) and 152/83 (usual care)
- Diabetes rates were similar in both groups (21-22%)
- Average age was 57 in the pilot group, and 59 in the usual care group
- Patient in RN/MD clinic had 1-2 additional visits in the 3 month period compared to the usual care group
- Systolic blood pressure (SBP) reduction was greater for patients in RN/MD clinic, - 21 mmHg vs. - 5 mmHg, p<0.05
- Diastolic blood pressure (DBP) reduction was greater for patients in RN/MD clinic, -10 mmHg vs. 0 mmHg, p<0.05
- Weight reduction was greater in RN/MD clinic, 0.9lbs lost vs. 1.7 lbs gained, p=ns
- Target BP was achieved in 75% (RN/MD clinic) vs. 26% (usual care), p<0.05

Lessons Learned

A collaborative, multidisciplinary clinic with an RN/MD team:

- Achieves better blood pressure control than physician care alone
- Highlights nursing skills of patient assessment and education
- Allows for patient engagement and shared decision making
- Improves patient access to care to allow for rapid titration of medications
- Reinforces benefits of lifestyle changes and self-monitoring of blood pressure

Next Steps

- Create a portfolio of resources that can be utilized by any provider at Healthcare Associates and formalize RN education on Hypertension management for all clinical RNs
- Expand RN/MD model to include other chronic disease conditions or clinical situations that would benefit from individualized patient assessment and counseling, such as diabetes, asthma, tobacco cessation, obesity and hyperlipidemia

[1] Egan BM, Zhao Y, Axon RN. US trends in prevalence, awareness, treatment, and control of hypertension, 1988-2008. JAMA. 2010; 303(20):2043.
[2] Chobanian AV, Bakris GL, Black HR, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: the JNC 7 report. JAMA 2003;289:2560-2572
[3] Carter BL, Rogers M, Daly J, Zheng S, and Paul A James. The Potency of Team-based Care Interventions for Hypertension. Arch Intern Med. 2009 October 26; 169(19): 1748–1755.

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