

# HYPERTENSION BEST PRACTICES SYMPOSIUM

## RN Hypertension Management Pilot

ESSENTIA HEALTH: EAST REGION  
DULUTH, MN



### ORGANIZATION PROFILE

Essentia Health is an integrated health system headquartered in Duluth, Minnesota, and providing services in four states: Minnesota, Wisconsin, North Dakota, and Idaho. Essentia Health: East Region, which serves northeastern Minnesota, northwestern Wisconsin, and Michigan's Upper Peninsula, has more than 6,200 employees and 400 physicians representing 55 medical specialties, and provides care at 17 locations.

Essentia Health uses the Epic EMR system, which was implemented 2004.

### PROJECT SUMMARY

The RN Hypertension Management program was developed to optimize hypertension management in patients with a diagnosis of diabetes mellitus and blood pressure  $\geq 130/80$ . The model was implemented at two pilot sites (Ashland and Superior, Wisconsin) and included pharmacologic and non-pharmacologic therapies consistent with JNC-7 guidelines:

- Shorten time between follow-up for patients
- Assess effectiveness of current medication regime with ability to titrate dose and/or add medication per protocol
- Individualize patient education regarding lifestyle modification

### GOALS AND OBJECTIVES

- Increase the percentage of patients with a diagnosis of diabetes and hypertension that have a BP  $< 130/80$ .
- Improve patient education, self-management skills, and lifestyle choices associated with the management of hypertension.

### HTN POPULATION

Patients aged 18-76 years with concurrent diagnoses of diabetes (Dx code 250.00-250.99) and hypertension

Total population: 89,760

Pilot site 1: 55 patients

Pilot site 2: 52 patients

Physicians chose patients for referral who had a recent adjustment in medication and were not at BP goal. Patients were chosen from the existing patient registry based on not meeting BP goal of  $< 130/80$ .

#### Demographics

Average age of patients in pilot: 64

Male: 54%

Female: 46%

Average BMI: 35

Non-smokers: 91%

#### Number of medications

0 Meds 4%

1 Med 20%

2 Meds 34%

3 Meds 29%

4 Meds 13%

## IMPROVEMENT MODEL

Essentia chose an RN-focused hypertension management strategy based upon previous successes with this model and evidence in the literature supporting RN participation in HTN management. Research has demonstrated that RN collaboration with physicians in management of HTN yields superior results in BP control compared to standard office-based management.

Effective management of HTN requires systematic and coordinated patient care. The group believes that a multidisciplinary approach, where RNs complement physicians, can influence goal setting, reinforce goals, and help ensure ongoing adherence.

Professional ambulatory care nursing is a unique domain of specialty nursing practice that focuses on health care for individuals, families, groups, communities, and populations. Ambulatory care nursing is characterized by professional (RN) nursing staff caring for high volumes of patients in short periods of time.

When the pilot project evolved, it was a natural transition from the telehealth nursing care of a wide range of patients to become the RN care manager for a defined population of patients with diabetes and hypertension. The RN chosen for this role indicated an interest and willingness to work with this group of patients. She was an experienced ambulatory care nurse and proficient in the workings of the clinic. At this point, there is not a particular credential for the RN care manager although certification in ambulatory care nursing is available. Ongoing education in diabetes, hypertension, and motivational interviewing is recommended for the role. It is anticipated that additional RN care managers will be added as the program expands.

## COMMUNICATIONS

Internal communication was achieved through direct or in-basket contact. Direct communication with clinical assistants was done by the physician, and the RN communicated with patient scheduling assistants (PSAs) directly or through in-basket contact. A presentation was also done at a monthly meeting of the physicians.

Patients were informed by their physician about the RN care manager and the help she could provide in helping them

to achieve their BP goals. At the start of the pilot, the RN care manager mailed letters to patients that were not at goal (identified through the Clarity registry report). The letter contained information about the importance of maintaining BP at goal and how the Essentia Health Care Team could partner with them to improve their health. They were encouraged to schedule an appointment with their physician to discuss how we could help. Phone calls were used extensively to contact patients who were not at goal, asking them to schedule an appointment with either their physician or the RN.

## LEADERSHIP SUPPORT

Leadership at Essentia is clearly defined and is strongly committed to disease management. This includes hypertension outcomes which are part of the Balanced Scorecard Strategy Map.

There is solid support for RN managed programs (Essentia's RN-managed anticoagulation program has been in place for many years) and RN care management for chronic conditions. Leadership supports replication of the RN-managed hypertension program to all clinical sites despite limited reimbursement in the current payment structure (fee-for-service).

## ASSESSMENT AND DEVELOPMENT OF TREATMENT PLAN

During the pilot, which ran from October 2009 through August 2010, an RN dedicated one day per week at each site. The RN worked with patients in the two panels to assess their understanding of their target BP and the importance of achieving and maintaining this target. Lifestyle factors that influence hypertension management were identified. The use of motivational interviewing enabled the patient to recognize potential areas of change. Together, the patient and RN created a collaborative BP management plan.

Motivational interviewing is a skillful clinical style for eliciting from patients their own good motivations for making behavioral changes in the interest of their health. MI works by activating patients' own motivation for change and adherence to treatment. Patients exposed to MI (vs. treatment as usual) have been found in various clinical trials to be more

likely to enter, stay in, and complete treatment; to participate in follow-up visits; to adhere to glucose monitoring; to increase exercise and fruit and vegetable intake; and to have few hospitalizations. Essentia provided educational opportunities for RNs to learn about MI.

The treatment plans encouraged home BP monitoring using validated and properly calibrated equipment. Patients were advised to choose a home blood pressure monitor meeting one of the following standards:

- Association for the Advancement of Medical Instrumentation (AAMI)
- British Hypertension Society (BHS)
- International Protocol (IP)

Patients were given a handout with details on cuffs that meet the approved standards. Approved Omron models were provided to each pilot site to lend to patients unable to purchase a home BP device. The duration of the loan was left to the discretion of the RN and was based upon the patient's progress towards goal.

Patients who had their own blood pressure equipment could bring it in and compare it to clinic equipment to ensure that the readings were the same. The clinic blood pressure equipment is calibrated annually by the BioMed department.

Patients were asked to record their BP at home each day, at the same time of day if possible. The RN reviewed each patient's readings at two-week intervals and used the data to guide drug therapy. The titration protocol was used if the patient fit the protocol. If not, the data were sent to the physician for input on changes in drug therapy.

The RN encouraged every participant to register for My Health, Essentia's online contact system, which would allow them to submit their home BP readings at a time convenient for them. If patients did not have access to a computer or chose not to participate, the RN made a telephone call to them every two weeks.

## LIFESTYLE INTERVENTIONS

Some lifestyle interventions have the potential to decrease blood pressure levels as well as a half dose or even a full dose of an antihypertensive drug. A combination of these lifestyle interventions is often needed to achieve success. The RN care manager focused on the following areas:

- **Diet:** risk factors, sodium intake, and DASH diet
- **Healthy weight:** counseling on weight reduction strategies and options was provided for patients with a BMI of  $\geq 25$  and referrals to a dietitian or weight management program were made as needed
- **Exercise:** after assessing the patient's current physical activity level, the RN, in collaboration with the healthcare team, advised 30-60 minutes of moderate-intensity exercise, 4-7 times/week
- **Alcohol:** the patient's use of alcohol, including quantity and frequency, was assessed using a validated tool, and recommendations were made as appropriate
- **Smoking:** the RN determined each patient's tobacco use status and facilitated referral to a smoking cessation program (the Wisconsin Quit Line) as needed
- **Stress:** the RN helped patients understand how they react to stressful events and learn how to cope with and manage stress effectively
- **"My Change Plan":** the RN and the patient create a change plan with "S.M.A.R.T." goals (specific, measurable, attainable, realistic, timely)

## MEDICATION TITRATION

As part of the overall assessment, the RN discussed the patient's medication regimen, including side effects and financial issues that might prevent proper adherence. The following protocol, which was developed at Park-Nicollet, was approved by Essentia physicians involved in the pilot for hypertensive patients with diabetes:

### Initiate/titrate dose per algorithm

Step 1: ACE inhibitor

Step 2: Add thiazide diuretic

Step 3: Add dihydropyridine calcium channel blocker

Each step in this protocol includes required labs, follow-up intervals, contraindications, relative contraindications, cautions, and guidance as to when the patient should consult the physician. All changes are documented in the EMR and messaged to the provider's in-basket.

## MONITORING, FOLLOW-UP, AND ADHERENCE

The RN assessed each patient's ability to adhere to the treatment plan and medication schedule. Patients who missed appointments received follow-up telephone calls. Referral to an Essentia pharmacist was considered for medication management when polypharmacy was a concern.

Physicians were provided with a weekly Clarity report listing patient compliance with 5 standards: A1C < 7, LDL < 100, BP < 130/80, tobacco, and antiplatelet compliant. This report, which was reviewed in person with the RN, allowed the doctors to review the status of patients whose BP was not at goal. From this information they would let the RN know which patients would benefit from contact. Then, for example, the RN would place a call to the patient asking them to schedule an appointment, update lab work, or come in for a BP check.

## OUTCOMES

Over the course of the 10-month pilot (October 2009 to August 2010), the percentage of patients at goal at site 1 jumped from under 10% to 60%. At site 2, the increase was from 10% to 42%. The difference in results may be attributed to better physician engagement and better follow-up with patients by

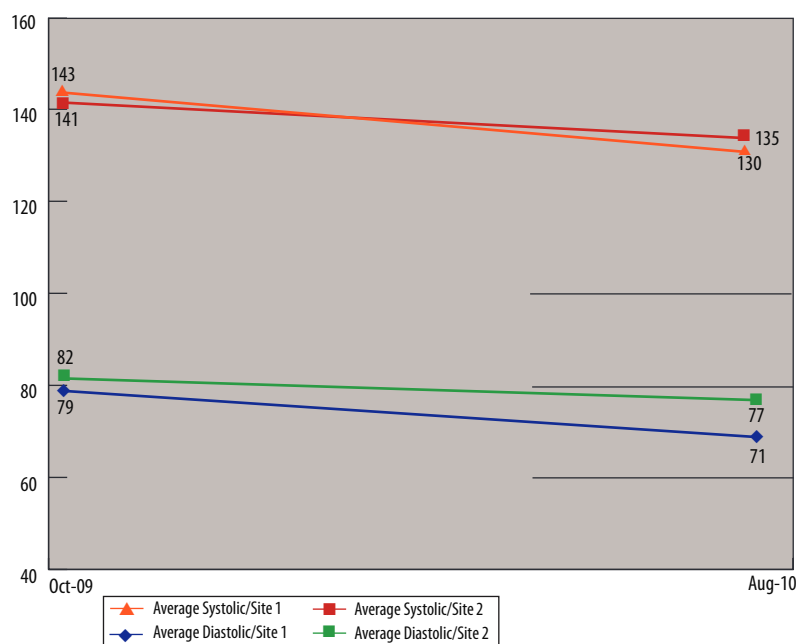
the RN at site 1. The combined population of 107 increased compliance from 10% to 50%.

Important success factors included:

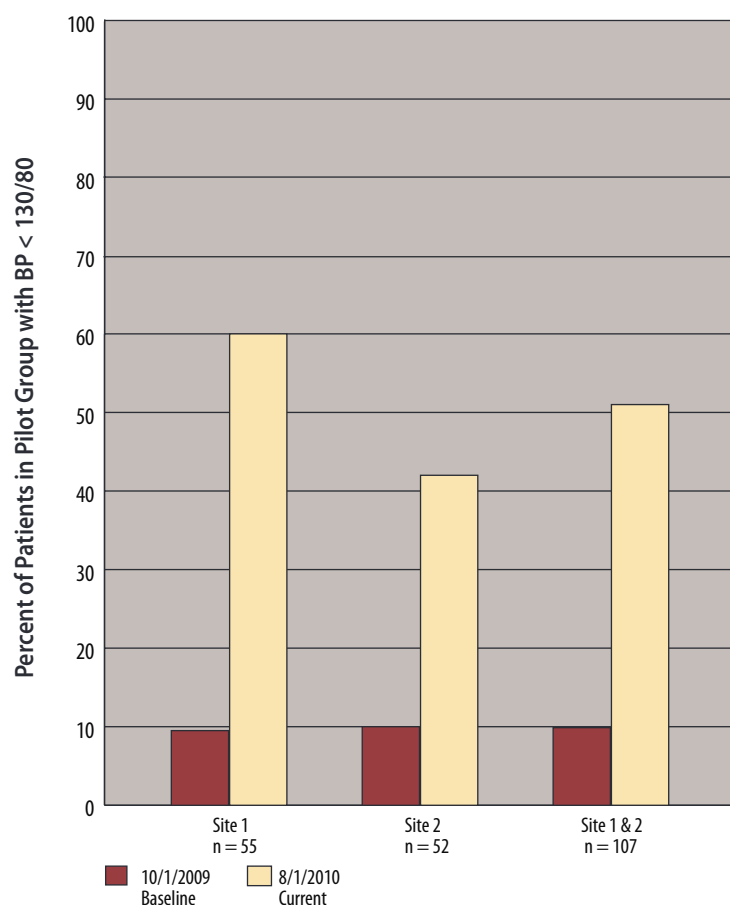
- Cooperative management with pilot physicians
- Follow-through and coaching
- Teamwork with ancillary staff
  - PSAs who contacted and scheduled patients who were due for follow-up
  - RNs who took opportunities at other appointment to check a BP
  - Clinical assistants who took BPs and handled referrals
- Increased patient satisfaction

Positive feedback from patients included comments to physicians and the RN that they appreciated the interest they took in managing their health. Patients expressed that they liked having a contact nurse to help with questions; they also liked follow-up phone calls, which helped them be accountable with taking home BP readings and following through with lifestyle changes.

**RN-Managed Hypertension Pilot  
Site 1 and 2  
October 2009–August 2010**



Percent of Patients Referred to RN-Managed HTN Pilot Program  
with BP < 130/80  
October 2009 – August 2010  
n = 107



## OVERCOMING BARRIERS

**Challenge:** Time constraints of only 8 hours per week

**Solution:**

- Use ancillary staff (schedulers) and tools within the EMR to reduce time demand on RN
- Take the opportunity to assess BP and modify treatment as appropriate when the patient is in the clinic for other reasons
- All providers are encouraged to do this as a way to improve BP control within different disease entities—hypertension, diabetes, vascular management

**Challenge:** Patients not fitting titration protocol

**Solution:**

- Develop an addendum to the algorithm that includes titration of beta blockers

- The development of a new protocol is underway, with ongoing discussion of which medications should be included

**Challenge:** Fragmented care between providers, such as multiple physicians (specialists) adjusting medications

**Solution:**

- Develop a clear referral process
- Use the EMR to help reduce gaps in care between providers and facilitate the referral process
- Meetings have been held with the Diabetes Center to facilitate improved communication and management of patients. There continue to be issues as to who is managing a patient and if they are managing the whole picture (including BP) or only A1C. Patients can fall through the gaps.

**Challenge:** Ambivalence of patients (“My blood pressure is fine.”)

**Solution:**

- Patient education
- Motivational Interviewing techniques
- Consistent message from all members of healthcare team
- Multiple motivational interviewing training sessions have been held with another two-day session planned.

**Challenge:** Clinical inertia on part of providers (BP is “close enough”)

**Solution:**

- Ongoing educational opportunities to build awareness of guidelines and best practice with reinforcement by physician leadership
- Laminated copies of the JNC-7 Reference Card distributed to all providers and a copy was placed in each exam room
- Measuring provider performance and providing regular feedback has become an important part of influencing change in a practice style. Regular feedback is provided to all physicians and is transparent throughout the system.

**Challenge:** Medication confusion, adherence, and cost

**Solution:**

- Obtain physician agreement with existing/evolving guidelines
- Medication management for patients with polypharmacy
- Referral to medication assistance programs when cost is a factor in adherence
- Use of validated tool to determine likelihood of adherence
- MTM (Medication Therapy Management) requires access to pharmacist

## LESSONS LEARNED

- As confidence increases in medication titration and RN management, Essentia anticipates increased improvement in outcomes.
- The team approach is essential. Improved management of hypertension cannot all take place in a 15-minute physician visit. Increased utilization of mid-level providers, RN care management, and ancillary staff delivering a consistent message is vital.
- Collaboration with the patient to set goals will increase engagement and long-term success. Patients have the ability to veto any advice as soon as they leave the clinic.



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