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Pamphlet to Promote Patient Education on HTN

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Pamphlet to Promote Patient Education on Hypertension and Diabetes

Jack Braidt (diabetes portion done by Matthew Lippel)

Family Medicine Rotation

New Milford Hospital Primary Care

New Milford, CT

May 2022



Epidemiology



Hypertension affects **between approximately one-third and one-half of adults in the US.**⁷



In the United States, **treatment of hypertension is the most common reason for office visits and for the use of chronic prescription medications.**¹⁻²



31.6% of adults in Connecticut reported being told they had high BP by a health professional.⁹



High blood pressure **costs** the nation about \$131 to \$198 billion each year.¹⁰

Adults with high blood pressure are estimated to pay almost \$2,000 more in annual healthcare costs compared to those without high blood pressure.¹¹

Problem Identification

In 2015 to 2016, the control rate for hypertension dipped to 49 percent, then dropped further to 44 percent in 2017 to 2018.³



Medication non-adherence for antihypertensives in the US is as prevalent as 31-42%^{4,5}



Approximately 65 percent of patients in the United States who report taking antihypertensive medications had blood pressure controlled to <140/<90 mmHg⁶

Reasons for Non-adherence⁸

- ▶ **Social** and **economic factors** such as age, race, sex, and socioeconomic and **educational status**
- ▶ Patient-related factors including readiness to change, **locus of control and self-efficacy**, future discounting, **health beliefs, health literacy, lack of knowledge**, forgetfulness, and fear of dependence
- ▶ Therapy-related factors including the complexity and cost of treatment, especially out-of-pocket costs, and **adverse effects**

Community Perspective

- ▶ Hypertension is a prevalent problem for patients visiting the Primary Care offices at New Milford Hospital
- ▶ Patients often have limited awareness of the complications of hypertension vs. the side effects of their antihypertensive medications
- ▶ Spoke with medical assistants and registered nurses at New Milford Hospital Primary Care
 - ▶ “The level of detail is great. The explanations are easy to understand.”
 - ▶ “I like how it highlights the difference in the rates of hypertension complications versus the rates of side effects from medications.”

HYPERTENSION

What is Hypertension (HTN)?

Blood pressure is the pressure that blood exerts on your arteries (blood vessels that carry blood from the heart to the rest of the body).

Hypertension (HTN) occurs when the pressure becomes too high, which can lead to problems down the road. It is diagnosed when the blood pressure is **consistently higher than 130/80 mmHg**.

Why is HTN a problem?

When blood pressure is too high, it can **damage your arteries and heart**.

High blood pressure puts a lot of stress on your arteries, which makes them more likely to become damaged. This has two main consequences:

It **reduces blood flow to vital organs** like the **brain, kidneys** and **eyes**, which makes them more prone to damage.

- HTN causes **54% of all strokes** globally.
- HTN increases the risk of **end-stage kidney disease** by approximately **2-fold**.

Your **heart must work harder** to get blood to your body. This puts a lot of stress on the heart and makes it more prone to damage.

- HTN causes **47% of all ischemic heart disease** events (ex. heart attack) globally.
- HTN increases the odds of developing **heart failure 2-fold in men** and **3-fold in women**.

How do we treat HTN?

Diet and exercise are very important. Weight loss alone can decrease blood pressure by 6 mmHg for every 22lbs lost. The **DASH diet** is the most well tested diet for helping to control HTN. **150 minutes of exercise per week** can also have significant effects.

When diet and exercise alone don't cut it, medications can be used. While these medications can have **side effects**, the likelihood of these side effects occurring is much lower (1.7% - 11%) than the likelihood of **cardiovascular diseases** like strokes and heart attacks (63.3%). Side effects vary by medication, so ask your doctor about your specific meds. Speak to your physician if you experience any side effects before stopping medication.

DIABETES

By now you likely already know Diabetes is a condition where the body has **difficulty regulating blood sugar levels**. But we also think it can be helpful to understand a little more about what's going on, what tests we like to run, how we treat it, and why.

What is a HgA1c test?

This is a blood test that **measures the amount of sugar that gets stuck to your red blood cells (RBCs)**. RBCs live approximately 120 days or three months and HgA1c detects all the RBCs that have some sugar on them. This is why HgA1c is measured **every three months**.

This is different than the "glucose" or blood sugar tests you do at home, or you see in your blood work because that measures sugar floating freely in your bloodstream at that moment.

See, if you were to eat something sugary, let's say a milkshake, your glucose (or sugar and carbohydrates) and triglycerides (or fats) would initially go up. This is why doctors often ask you to fast before you do blood work. But with HgA1c, even if you have that milkshake right before your blood test, it doesn't really impact the RBCs that already have sugar stuck to them. It is why we use it to gauge how you've been doing.

Why do we treat it?

As we already saw, sugar sticks to RBCs. But that's not all it sticks to. **Sugar can deposit itself on vessel walls**, particularly small ones found all over your body. This can lead to **damage to your eyes, kidneys, and more**. It can also damage large vessels too, leading to **heart issues**. It can impact nerves preventing you from sending critical messages from your brain to other parts of your body or even lose sensation. This isn't meant to scare you, only to make you aware that these are potential consequences or "side effects" of Diabetes.

Side effects

Everyone is worried about the side effects of medications. Sometimes some of the things we hear can be quite scary. It is important to recognize that side effects aren't guaranteed to occur. They are mentioned because these are **signs that the medication isn't behaving as desired** and that if you experience them, notify your doctor. It is also important to weigh these potential risks with those of the disease itself. As mentioned above, the "side effects" of Diabetes and Hypertension can be quite severe.

Interventions/Methods

- ▶ Create a pamphlet to help improve patient knowledge and confidence in managing their hypertension and/or diabetes
 - ▶ Diabetes portion was created by Matt Lippel who distributed the pamphlet at Newtown Primary Care
- ▶ Distribute pamphlet and survey assessing pamphlet efficacy to patients at New Milford Hospital Primary Care who are visiting for hypertension (or diabetes) follow-up

Diabetes and Hypertension Pamphlet Assessment

None of your identifying information will be used for this project.

1. Did you find this pamphlet helpful?

Strongly disagree Disagree Neutral Agree Strongly agree

2. Did you like the level of detail in the explanations?

Strongly disagree Disagree Neutral Agree Strongly agree

3. Did this pamphlet make you more likely to follow the recommendations of your doctor?

Strongly disagree Disagree Neutral Agree Strongly agree

Comments:

Results

- ▶ Pamphlet & survey was distributed to 5 patients visiting New Milford Hospital Primary Care for follow-up on hypertension and/or diabetes
- ▶ Responses were analyzed on a 5-point Likert scale
 - ▶ Did you find this pamphlet helpful? Mean: 4.125
 - ▶ Did you like the level of detail in the explanations? Mean: 4.25
 - ▶ Did this pamphlet make you more likely to follow the recommendations your doctor? Mean: 4.25

Recommendations

Continue to use short pamphlets to improve patient knowledge of hypertension & diabetes and related complications



Use pamphlets to discuss the benefits vs side effects of therapy/medications



Continue to collect survey data from patients with diabetes and hypertension

- This information can be used to update the pamphlet with information most pertinent to the patient/improve communication between providers and patients

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