

Minneapolis Fruit & Vegetable Prescriptions

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As the rates of preventable chronic disease in America continue to rise, it is clear change is needed. Preventable chronic diseases account for approximately \$2.15 trillion in healthcare costs annually (CDC, 2014). Fruit and vegetable prescriptions can decrease this annual cost. Many of the preventable chronic diseases, such as obesity, hypertension, and heart disease, are strongly related to diet and lifestyle choices. Providing fruit and vegetable prescriptions to patients in a healthcare setting is simple, and such efforts have already proven effective. Insurance companies have the power to implement these prescriptions and would benefit greatly from the cost savings provided. Expanding and standardizing fruit and vegetable prescription programs in Minneapolis can serve as a pilot program. When successful, it will help cities across the country save money and improve health.

Introduction

Many policies have been crafted to increase national fruit and vegetable intake, yet many populations still consume less fruits and vegetables than recommended. This is true in Minneapolis and Nationwide (See Figure 1). Fruit and vegetable prescriptions are a realistic and feasible solution. *Fruit and vegetable prescriptions are an inexpensive way to reduce overall healthcare spending.* With food prescriptions for fruit and vegetables, 69% of patients increase their intake and 45% of patients decrease their BMI (Wholesome Wave, 2015).

There are two reasons to implement fruit and vegetable prescriptions in clinics and hospitals throughout Minneapolis: *cost saving and improved overall health.* Increasing overall patient health will decrease healthcare costs, thus saving insurance companies money. Additionally, preventing the onset of chronic diseases will improve overall health.

Consequences of Low Fruit and Vegetable Intake

It is difficult for patients to attain ideal health without fruit and vegetable consumption. People with common chronic diseases could benefit from increased fruit and vegetable consumption, including

Cardiovascular Disease (CVD) and obesity and its associated high Body Mass Index (see Figure 2). Two key risk factors for heart disease are high blood pressure and high cholesterol, both of which are significantly impacted by fruit and vegetable consumption (Heart Disease Risk Factors, 2015).

Fruits and vegetables are rich in many essential nutrients and are less energy dense than commonly consumed convenience and fast foods. With much of the American diet consisting of convenience foods, overall energy consumption is higher than recommended. This high energy consumption and low fruit and vegetable intake is associated with obesity. Fruit and vegetable consumption is important for weight management.

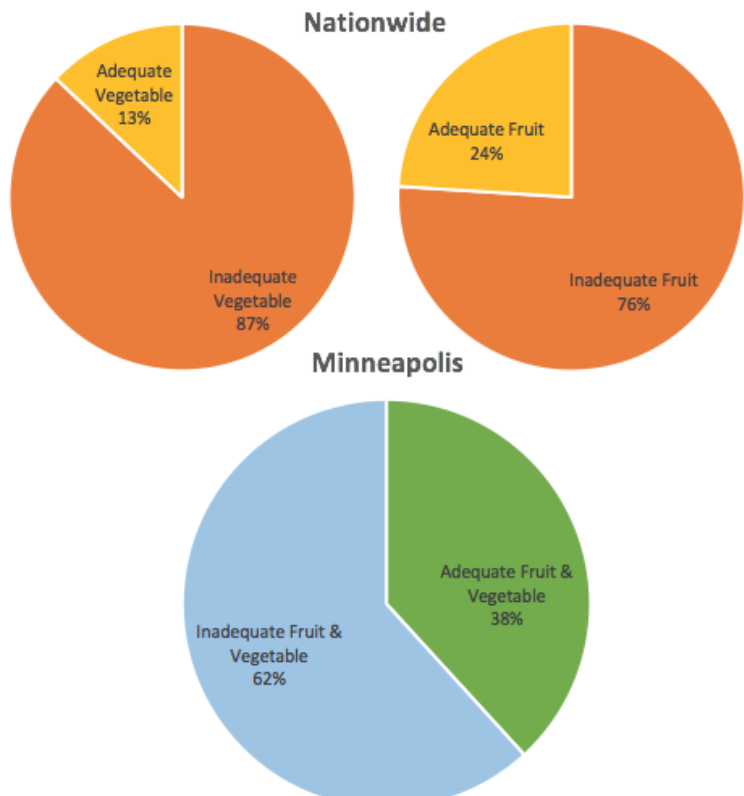
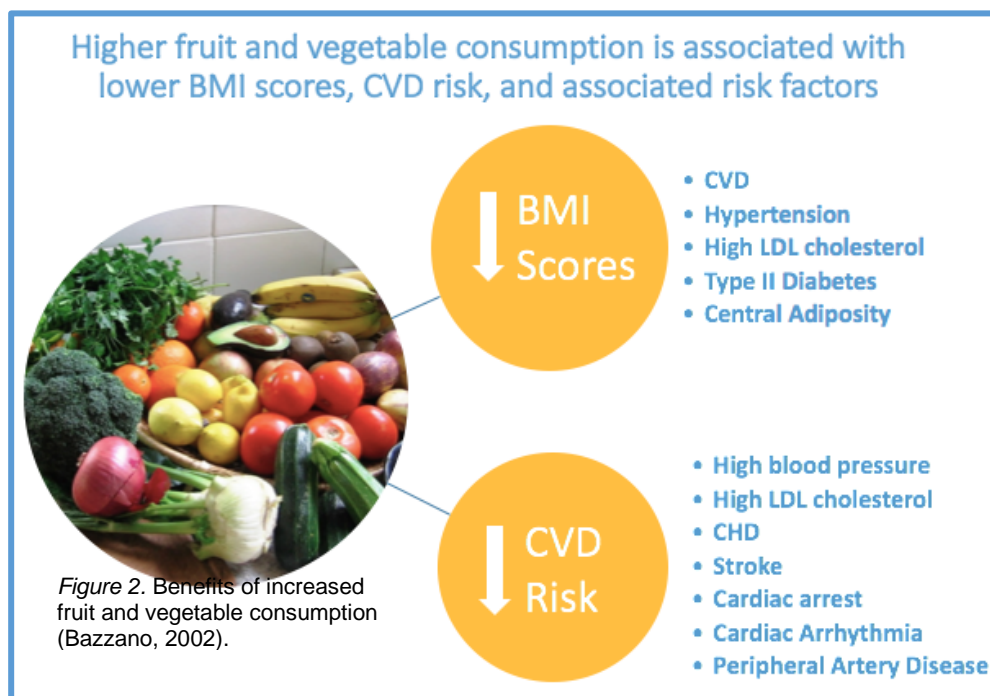


Figure 1. As defined by the USDA and HHS, adequate fruit intake is equal to two of fruit per day and adequate vegetable intake is equal to two and a half cups of vegetables per day (Moore, 2015). As defined by Metro SHAPE 2014 Adult Survey, adequate fruit and vegetable intake is equal to five or more servings of fruit and vegetables per day (SHAPE, 2014).



Current Initiatives

Several initiatives are already underway to encourage fruit and vegetable intake in Minneapolis and throughout the United States. Although the initiatives have resulted in significant increases in fruit and vegetable consumptions, they remain insufficient as fruit and vegetable consumption remains low.

The table below offers a glimpse of efforts by our local community and beyond.

Hennepin County Medical Center	HCMC has a Therapeutic Food Pharmacy which provides grocery bags of food for \$1.50, along with nutrition education.
HealthPartners	After successfully piloting an initiative in 2014, HealthPartners expanded a fruit and vegetable prescription program to all 58 of its clinics. The program provides children with \$10 vouchers for fruits and vegetables from local grocery stores.
FreshRx	Outside of Minnesota, the Philadelphia Children’s Hospital’s FreshRX program provides prescriptions for weekly reduced-cost boxes (\$10 and \$15) of fresh produce for purchase both at the hospital and at several distribution sites in nearby neighborhoods. Nutrition education is also provided, including tips on budgeting, cooking demonstrations and taste tests.
Wholesome Wave	Wholesome Wave is a national leader in the fruit and vegetable prescription program. Between 2011 and 2015, Wholesome Wave initiated programs in 10 states, serving 8,425 individuals and family members with successful results. Overall 69% of participants have increased fruit and vegetable intake and 45% have decreased their BMI.
Fresh Prescription	In July 2013, Detroit began its Fresh Prescription program, which provides prescriptions to participants to increase their consumption of fruits and vegetables. Prescriptions can be “filled” at participating sites, and nutrition education is available.

Wholesome Wave

Wholesome Wave is a national leader in the fruit and vegetable prescription program. Between 2011 and 2015, Wholesome Wave initiated programs in 10 states, serving 8,425 individuals and family members. Throughout the country, Wholesome Wave has seen great success with its program. From 2011 to 2015 *69% of participants have increased their fruit and vegetable intake and 45% have decreased their BMI* (Wholesome Wave, 2015).

Wholesome Wave’s 2014 New York City program evaluation reports that 91.4% of parents reported talking about fruits and vegetables at least once during their doctor visits. This led to a 70% increase in fruit and vegetable intake during the intervention. There were 94 patients who completed the initiative; of those *42.6% of the patients had a decrease in their BMI from the beginning to the end of the initiative* (Wholesome Wave, 2014). Wholesome Wave’s program provides compelling results. Minneapolis would benefit from a similar initiative.

Detroit Fresh Prescription

In 2014 Detroit’s Fresh Prescription program had 241 enrolled participants. This program, as well as Wholesome Wave, shows compelling outcomes for fruit and vegetable prescription programs. *85% of participants reported an increase in fruit and vegetable intake.* These outcomes, in conjunction with Wholesome Wave’s, show the large impact the same investment of food prescriptions can make. (Savoie & Milgram, 2014)

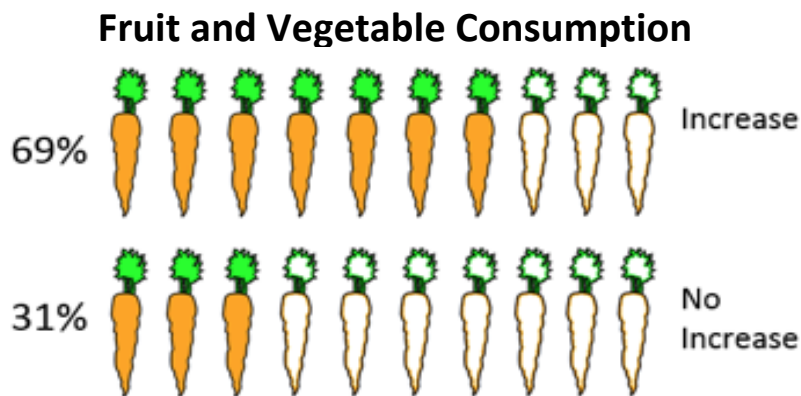


Figure 3. Wholesome Wave successful fruit and vegetable consumption increases from 2011 to 2015 (Wholesome Wave, 2015).

Economic Implications

Community-based prevention programs have the potential to significantly impact healthcare spending both locally and nationally. In the United States, annual healthcare costs total \$2.5 trillion. Of this amount, \$2.15 trillion is spent on treatment of chronic disease (CDC, 2014), with \$442 billion spent on cardiovascular disease (HHS, 2011) and \$147 billion spent on obesity (APHA, n.d.).

A 2009 report on chronic disease prevention states that the U.S. could cut annual healthcare spending by \$2.8 billion in just one to two years’ time by spending as little as \$10 a year per individual on targeted prevention programs. The projected return on investment within a five-year time based on medical costs alone is 5.6 per dollar invested. Additionally, the potential annual cost savings in Medicare and Medicaid spending within the first two years are \$487 million and \$370 million, respectively. The projected annual healthcare cost saving potential for private insurers is even greater, around \$2 billion in the first two years, increasing to \$9 billion within 5 years of program implementation (Levi, Segal & Juliano, 2009).

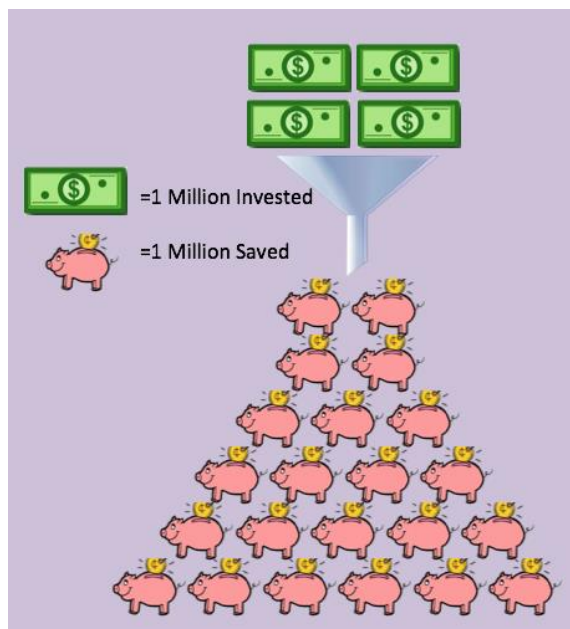


Figure 4. \$10 invested in each resident of Minneapolis could lead to a 5.6 times return on investment (Levi, Segal & Juliano, 2009).

This substantial decrease in healthcare costs nationwide will be evidenced by a pilot prevention program in Minneapolis. Spending \$10 per year on individual residents of Minneapolis in the form of fruit and vegetable prescriptions will lead to a \$5.60 saving per dollar invested (Levi, Segal & Juliano, 2009). This equates to more than 22 million dollars in annual healthcare cost savings for the city (see Figure 4).

Fruit and vegetable prescriptions are an inexpensive way to increase fruit and vegetable consumption while decreasing healthcare costs and increasing patient health.

Policy Recommendations

Our recommendation is the introduction of fruit and vegetable prescriptions throughout healthcare institutions in Minneapolis as a pilot program to be expanded nationwide. At a normal doctor's appointment, the doctor assesses the patient's access to and intake of fruits and vegetables. If the doctor determines the patient does not have easy access to fruits and vegetables, and therefore lacks adequate intake, the doctor will write a \$10 fruit and vegetable prescription. The cost of this prescription will be billed to insurance. The prescription can be redeemed at the hospital store, local farmer's markets, partnering grocery stores, and partnering corner stores. Implementing this recommendation will decrease overall healthcare costs and increase patient health.

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