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# Assessing Barriers to Healthy Food Access in Winooski, VT

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**Authors**

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## Introduction

- The local food environment plays an important role in defining the health of the neighborhood and is an important determinant of resident's dietary intakes.<sup>[1]</sup>
- Specifically, food availability, affordability, and accessibility have been linked to diet quality and various health outcomes.<sup>[2]</sup>
- Fresh fruits and vegetables are markers for nutritional diets.<sup>[3,4]</sup> Grocery stores and super markets tend to have better quality fruits and vegetables, greater variety and better affordability than convenient stores that tend to have more prepared and higher calorie foods.<sup>[5,6,7]</sup>
- People who live in neighborhoods with better access to supermarkets tend to have a greater daily intake of fruits and vegetables.<sup>[7,8]</sup>
- Increased distance from supermarkets is negatively associated with healthy food intake in a study of pregnant women.<sup>[2]</sup>
- "Food deserts" are areas that are devoid of a local supermarket where residents have a limited ability to purchase affordable healthy foods.<sup>[10]</sup> They have become an emergent problem in the United States. This paucity of supermarkets in these areas combined with lack of private or convenient transportation among poorer residents may contribute to health disparities across socioeconomic classes.<sup>[9,10]</sup>
- The town of Winooski, VT has a population of 7,267.<sup>[11]</sup> Although there are local food markets and convenient stores within the town, Winooski lacks a larger grocery store.
- Insufficient public transportation and inadequate pedestrian sidewalks make it more difficult for residents to access supermarkets located in other towns.

## Objective

The goal of this project is to evaluate transportation and ease of access to fresh produce in the town of Winooski.

## Methods

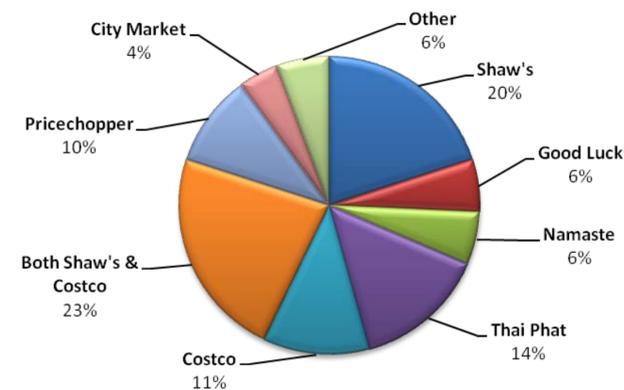
- Designed a survey to assess where residents of Winooski shop for produce and what barriers, if any, existed that prevented them from accessing fresh fruits and produce to meet their demand.
- Organized a community health fair at the O'Brien Community Center in Winooski.
- Administered surveys to residents at the Winooski Coalition for a Safe and Peaceful Community on two separate days (one during community health fair and another at a Thanksgiving community dinner).
- Analyzed data to make recommendations for the city of Winooski to address any barriers that prevented access to fresh produce.

## Results – Participant Characteristics

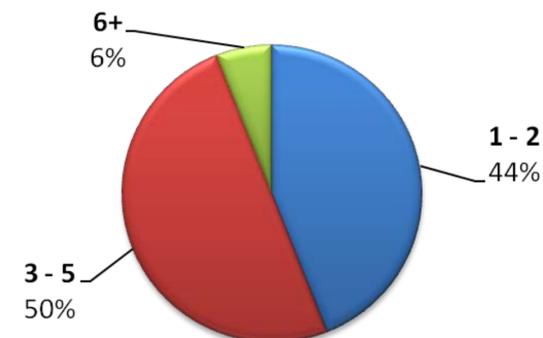


- The majority of participants indicated they obtain fresh produce from **Shaw's** or **Costco**.
- More than half of those surveyed consume greater than 3 servings of fresh produce daily.

### Sources of Food

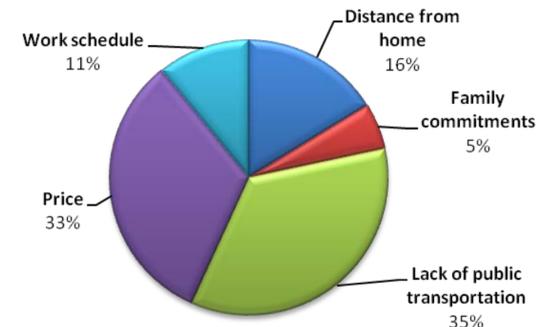


### Daily Meals with Fresh Produce

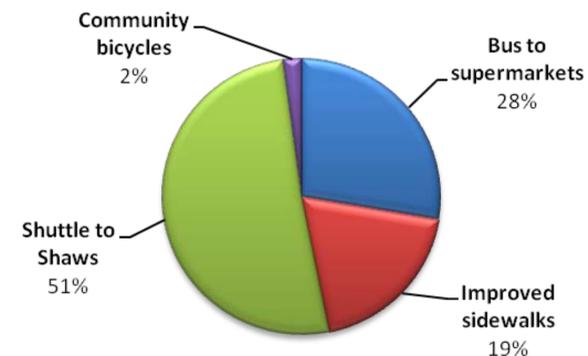


## Results - Barriers to Fresh Produce

### Barriers to Obtaining Fresh Produce



### Suggestions for Improving Access to Fresh Produce



- Price and lack of access to public transport are key barriers to obtaining fresh produce.
- When considering the correlation between household size and servings of fresh produce consumed by each individual, Freeman-Halton extension of Fisher's exact test on the survey data yields a p value of 0.047 - indicating there is a small correlation between household size and servings of vegetables consumed.
- The nature of the relationship between household size and servings of vegetables was unanticipated, given that the larger households consumed more servings of vegetables per person.



## Discussion

- Studies have shown that chain grocery stores and super markets have a larger variety of healthy produce that is more affordable (Nutrition Environment Measures Survey in Stores) which was also found in Winooski.
- 53% of participants reported that their primary source of fresh produce is a large store such as Shaw's, Costco, or Price Chopper
- Just over half of participants are consuming 3 or more servings of fresh produce daily, indicating that a number of residents are disadvantaged due to availability of produce in the smaller local markets.
- However, 51% reported that distance and/or transportation is an obstacle to accessing such stores.
- An overwhelming majority stated that the best way to increase access to the local Shaw's would be through an increase in public transportation to the site. The community feels strongly that a shuttle to Shaw's would be helpful in helping them increase accessibility to produce.
- Therefore, while people may be consuming adequate produce, it is important to ensure that they are obtaining their produce in a safe way.

## Conclusion and Future Directions

- It would be beneficial for Winooski residents to have a focus group pertaining specifically to the issue of barriers to public transportation to grocery stores as a basis for developing a community action plan
- Change will need to begin from within the town itself, but will need the assistance of strong leadership.
- Although we did not record personal health information at the health fair, a number of people were found to have elevated blood pressures in the hypertensive range.
- Future studies could hypothesize a correlation between blood pressure and reported fresh produce consumption, and furthermore observe any connection with grocery store access.

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