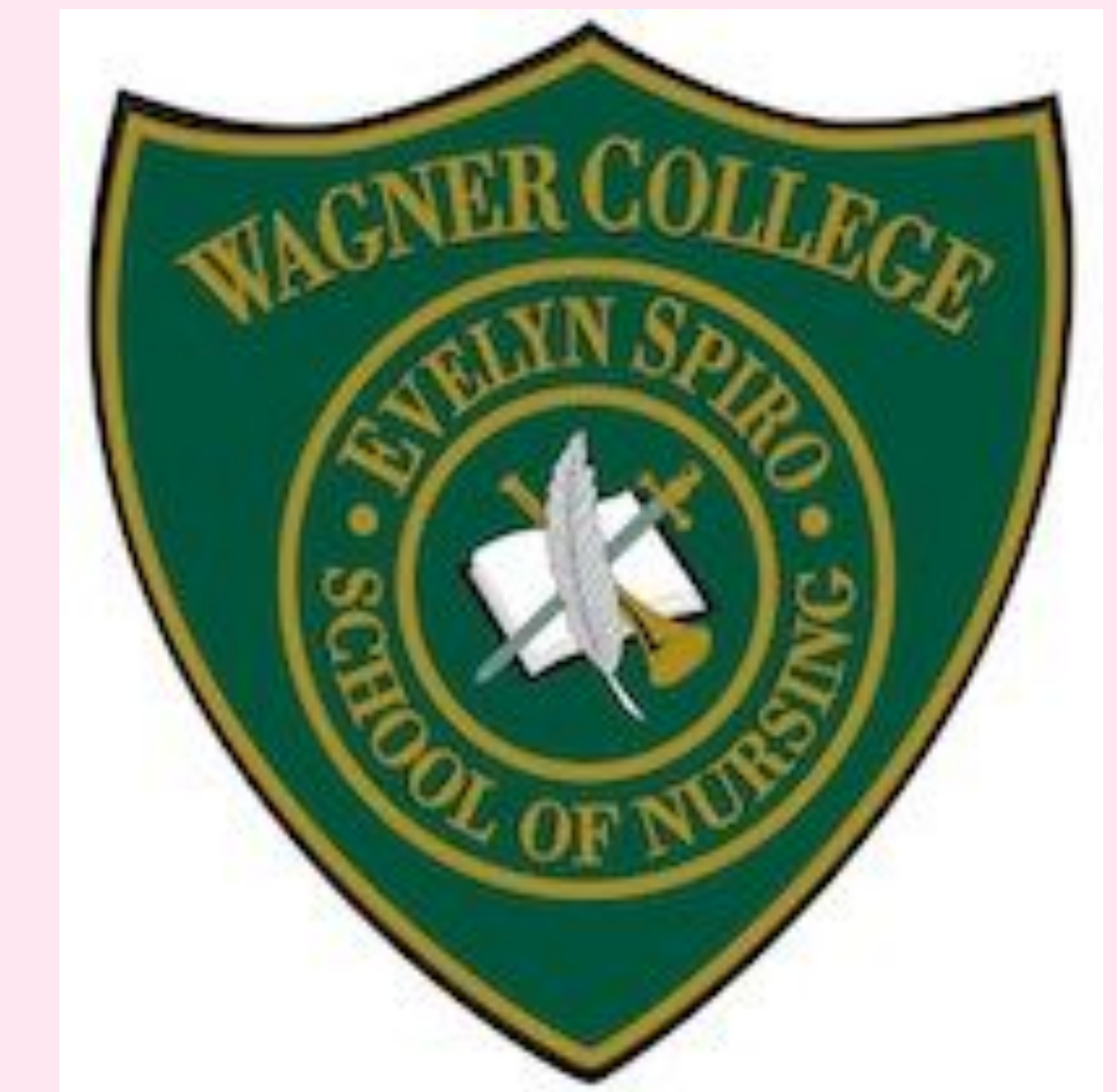




The Relationship between Diabetes And the North Shore Community of Staten Island

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Introduction



- By the means of our research there has seen to be a prevalence of diabetes within the Latino adult population in the North Shore community of Staten Island.¹
- Factors that influence the prevalence of the disease include a lack of access to health care, poor diet, as well as limited activity and neighborhood resources.
- Our research includes what we can do as a community, and what types of effort can we put into play in order to change the dynamics of the prevalence of diabetes affecting the people of the North Shore portion of Staten Island.
- In order to decrease diabetes mellitus in this neighborhood our proposed solution includes several components to aid in the improvement of the health of this community for years to come.

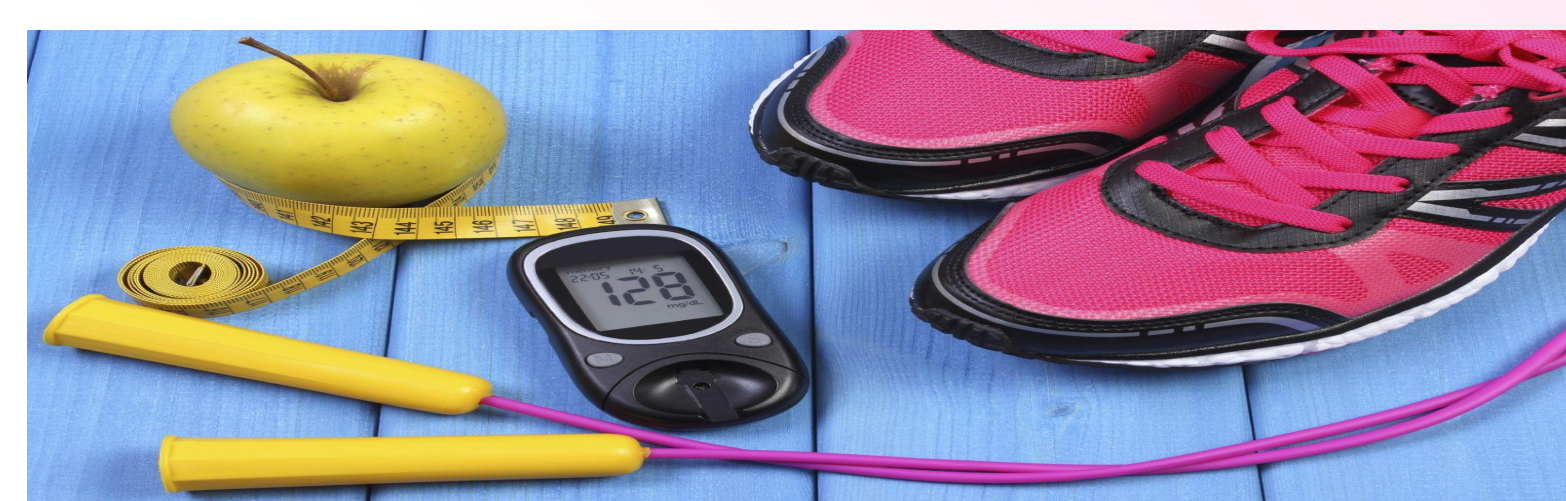
Problem within the Community



- Diabetes mellitus is defined as a result of an excess of sugar in the blood. Type 2 diabetes can be a result of poorly controlled diets, lack of essential exercise or as a result of an underlying disease.
- North Shore has a lower economic status in Staten Island. Obesity is an epidemic on Staten Island with 63.5% of adults aged 24-64 are either overweight or obese.²

| | St. George and Stapleton | Staten Island | NYC | Lowest % |
|---------|--------------------------|---------------|-----|--|
| Obesity | 24% | 25% | 24% | 4% Financial District, Greenwich Village-Soho |

- As seen in the North Shore of Staten Island research shows that diabetes has a higher prevalence in this community due to the lower economic standards.¹
- As analyzed, it is safe to say Hispanic experience a higher burden and mortality from diabetes than other ethnic groups.
- The North Shore residents contain a 44.2% Hispanic origin whereas Staten Island is at 46.8%.¹
- When income is low and resources limited, residents of those affected may be compromising their health.
- Food pantries seen in lower income neighborhoods "have low inventories of key food groups such as fruits, vegetables, and dairy products. Since these individuals have limited options available for their food choices, this may increase the prevalence of choosing an unhealthy food option. As a result, this can cause a risk factor for type 2 diabetes mellitus as well as a risk factor for other health issues.¹



- Physical exercise can increase energy and help us for the future with everyday life. Studies show that exercise can improve an individual's health status and reduce numerous of diseases.¹

| | FASTING | JUST ATE | 3 HOURS AFTER EATING |
|--------------|---------|----------|----------------------|
| NORMAL | 80-100 | 170-200 | 120-140 |
| PRE-DIABETIC | 101-125 | 190-230 | 140-160 |
| DIABETIC | 126+ | 220-300 | 200+ |

- Regarding health insurance, the uninsured cohort has the highest percentage of Latinos (81 percent) and the highest baseline A1c (9.4). A1c is the lab value associated with diabetes and the glucose levels ranging from the lowest 4 and the highest 14. The higher your A1c the more at risk for diabetes related issues to come about.¹
- When income is low and resources limited, residents of those affected may be compromising their health. If the individual is not able to afford the resources to track as well as control their disease in efforts of medical supplies as well as diet, it will affect their long-term health overall

Proposed Solution



- Overall the Community health goal is to see a decline in the prevalence of type 2 diabetes within the North Shore. In addition, a decline of obesity among these individuals. With the contributes with a healthy lifestyles, as well as greater knowledge giving to the community will support our goal within these efforts.
- Some examples of how we plan on doing this is:
 - The Dexcom application tracks glucose levels 24 hours a day and is a very helpful and innovative application that engages individuals with the disease to maintain and control their health.
 - This would improve health in the community and studies have shown that some continuous glucose monitoring systems may help reduce A1C^{1,2} levels and reduce the risk for hypoglycemia and hyperglycemia.⁴
 - Our innovative health program consists of an exercise program to maintain a healthier lifestyle and decrease the risk of type 2 diabetes. Our slogan is "DON'T SUGAR COAT IT, YOU'RE SWEET ENOUGH"
 - Another proposal is to incorporate community board meetings that will allow the North Shore community to receive information regarding diabetes.

DEXCOM APPLICATION

- Within this application individuals are able to connect a small device to any subcutaneous areas of the body which transmits blood glucose readings back to the app on your phone via blue tooth.⁴
- You'll be able to view your data in easy-to-read graphs, view trends, statistics and day-by-day data, and even email them to your healthcare professional right from the Dexcom webpage.⁴
- This device is eligible for diabetes age 2 and older. A prescription is needed to obtain a meter.⁴
- Many insurance cover the Dexcom meter along with the doctor prescriptions making it easily available.⁴



- DON'T SUGAR COAT IT , YOU'RE SWEET ENOUGH
- Our innovative health program consists of an exercise program to maintain a healthier lifestyle and decrease the risk of type 2 diabetes.
- We would aim to help start an after-school exercise program available to individuals who want to maintain their weight and the prevention of diabetes.
- The exercise program consists of a Zumba, Yoga classes in which individuals can dance to burn calories and maintain a healthy weight and glucose level and normal A1c level.

COMMUNITY HEALTH MEETINGS

- In these community board meetings we aim on having insurance companies fund these meetings and doing various activities to help prevent and promote diabetes.
- Members would be able to discuss health concerns, ways to prevent diabetes or if they already have diabetes, ways to improve it and maintain a normal A1C level to prevent other health issues.
- One activity that can be held during this meeting is nutritional information can be provided along with cooking classes to help individuals acknowledge what to eat in order to maintain a healthy diet and their diabetic regimen.

Community Assessment and Analysis



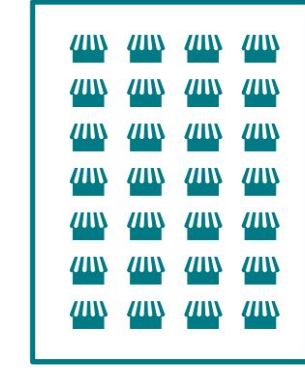
- Staten Island as a whole is ranked to be the least populous borough of New York City, whereas within the city's 59 districts the North Shore portion of the island is ranked fourteenth highest population.¹
- Within the North Shore, a 30.4% Latino race/ethnicity is present as in comparison to 18.3 % demographic within Staten Island as a whole.¹
- Access to healthcare is impacted by several factors including health insurance coverage and provider availability where North Shore residents have higher uninsured rates between 8.8% to 13.5% when compared to Staten Island overall's health insurance rates.³

| ACCESS TO HEALTH CARE (percent of adults) | St. George and Stapleton | Staten Island | NYC | Lowest % |
|---|--------------------------|---------------|-----|---------------------------------------|
| Adults without health insurance | 12% | 7% | 12% | 3%* Stuyvesant Town and Turtle Bay |
| Adults without needed medical care | 10% | 8% | 10% | 3%* Bayside and Little Neck |

- With their being several hospitals on Staten Island, the North Shores main resource they have available for them is Richmond University Medical Center which is in West Brighton. Access to primary care services can improve chronic disease prevention and management efforts.
- One major resource in the North Shore community is transportation accessibility. Household income levels have an effect on vehicle accessibility, which then leads to certain differences in a commuting method.
- According to NYC health, "For every one supermarket in St George and Stapleton, there are 28 Bodegas, bodegas are less likely to have healthy food options than supermarkets" The residents in the North Shore are more likely to buy food at a bodega, rather than to go to a supermarket because of the unequal ratio. This being another major factor contributing to the prevalence of diabetes within the North shore.¹

SUPERMARKET TO BODEGA RATIO
For every one supermarket in St. George and Stapleton, there are 28 bodegas.

28



| | St. George and Stapleton | Staten Island | NYC | Lowest % |
|--|--------------------------|---------------|-----|--|
| One or more 12-ounce sugary drinks per day | 27% | 26% | 23% | 8% Financial District, Greenwich Village-Soho |



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