Service Learning Project:

The Prevention and Maintenance of Diabetes in the Community of 11206

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Abstract

We performed a detailed assessment of the community within the zip code of 11206, which include the neighborhoods of Bushwick and Williamsburg. Our research showed that although cancer and cardiovascular disease are ranked as top causes of death within this zip code, diabetes diagnoses are in fact on the rise. We saw this as an opportunity to provide the residents of this area with appropriate teaching about this disease, including its epidemiology, the signs and symptoms that present (specifically those of hypoglycemic and hyperglycemic states), complications that can occur if this disease is not treated and maintained properly, and lastly, methods of preventing and maintaining diabetes, such as exercise, proper nutrition, and medications. We presented at two different locations within this zip code: the Williamsburg Community Health Center and the Geriatric Wellness Center. Our audience at the Geriatric Wellness Center was approximately twenty-two older adult patients aged over 65 years, whom most were Spanish-speaking only. The audience at the Williamsburg Community Health Center was made up of staff members (registered nurses, nurse practitioners, management, and administration) who all spoke English and were of various ages. Knowledge regarding diabetes was measured both before and after the presentations (using a pretest/posttest format and word of mouth), and outcomes showed that attendees did in fact obtain or strengthen their knowledge about diabetes.

**Project Details**

After several weeks of researching and assessing our assigned zip code of 11206, we decided that we should provide residents within this area with a lesson on diabetes. We selected diabetes because research showed that although top causes of death were cancer followed by cardiovascular disease (NYCDOHMH, 2006), there is also an increasing incidence of diabetes diagnoses. Therefore, we decided to name our project, The Prevention and Maintenance of Diabetes in the Community of 11206.

**Names and Responsibilities of the Group Members**

Our team was made up of eight people. All work and responsibilities were evenly divided amongst all team members. Deanna Scarlett was responsible for providing a description of the community assessment (Part II), while Zippora James, Sonam Osgmo, and Lizet Rodriguez performed an actual assessment of the area, including community-based needs, care management techniques, and influences on resource allocation (Part III). Danny Tam was responsible for applying all data, and compiling several diagnostic statements about the community of 11206 (Part IV). Kristine Lauriello (Team Leader) and Kathleen Cruz were responsible for recording both the planning and implementation of this project (Part V), and Erica Williams evaluated our success (Part VII), including whether or not we accomplished our goals, and a general evaluation of our project.

**Dates and Times of Data Collection**

Data collection for this project commenced on our first day of clinical on February 4th, 2015, which was an orientation at Woodhull Hospital (located within the zip code of 11206). On Wednesdays of each following week between the hours of 8:30 am and 12:40 pm, we would collect data from the different locations we were assigned too – all within zip code 11206.

**Description of the Community Assessment**

The information provided in this section will give a brief overview of the community covered by zip code 11206. Within this zip code can be found two neighborhoods known as Bushwick and Williamsburg. However, its neighboring communities also include Williamsburg and Bushwick, as well as, Greenpoint.

**Use Census Tract or other statistical resources to determine boundaries of the community**

Woodhull Medical and Mental Health Center lies within the zip code 11206 and is located in Brooklyn, NY. Specifically, it is located in the northwestern region of Brooklyn. It lies between other neighboring areas such as Williamsburg, Greenpoint and Bushwick. (Wikipedia, 2015)

**Summary statements/paragraphs of the community.**

The zip code 11206 refers to the neighborhood commonly called East Williamsburg. Its bordering neighborhoods are Bushwick, Williamsburg and Greenpoint. There are approximately 81,677 people living in this area (USA City Facts, 2013). According to USA City Facts, 35,118 people are Hispanic (43%), 34,534 people are White (42.3%), 23, 108 people are Black/African American (28.3%), 4,233 people are Asian (5.5%), 736 people are Indian/Alaska Native (0.9%), and 52 people are Native Hawaiian/Pacific Islander (0.1%) (USA City Facts, 2013). The area is predominantly female with women accounting for 52.4% of the population, while only total 47.6% (USA City Facts, 2013).

There are a wide variety of different age groups that reside in this particular area of Brooklyn. However, according to USA City Facts (2013) and the US Census, 34,357 of the people are younger than 25 (42.1%), 27,989 people are between the ages of 25 and 44 (34.3%), 14,732 people are between the ages of 45-64 years old (18%) and 7,119 people (8.7%) are over the age of 64 (USA City Facts, 2013). These statistics illustrate the composition of this community -- which is mostly Hispanic, female and is heavily populated with children and young adults.

In 2010, the unemployment rate of individuals that live in this area is 10.6%. From a national standpoint, this is considered to be high. The national unemployment rate is 7.9%. That is a 2.7% difference. According to City-Data, the estimated household income for this population is $28,114. This is a $27,132 differential from the national estimated household income which is $55,246. This is an important factor to note when analyzing the community as a whole because it will provide an insight into the lifestyles of its members and a description of its overall health.

In summary, we chose diabetes as the leading health objective for the 11206 community because when analyzing the statistics; diabetes was very prevalent amongst members of this community. We felt as though we needed to address this issue. We set out to help improve these statistics by educating individuals and implementing specific nursing interventions. We hope to help decrease the incidence of diabetes.

**Supplemental data (photos, videos, other material).**

Photos delineating the boundaries of this zip code and its neighboring communities can be found in the section tabbed ‘Part II’ in the back.

**Areas of Assessment**

**Focus on Community Based Needs (Zip code 11206)**

Each and every community has needs. These needs can often be determined by the research of and assessment of aspects of a community such as patterns of morbidity and mortality, the demographics of the area, and the different environmental concerns that may be indicated. Furthermore, it is important to be aware of what public services are offered in a community, along with any health-related facilities and aesthetics. When surveying a specific community, a combined overview of each of these aforementioned aspects can provide a snapshot of its overall health.

**Patterns of morbidity and mortality.** According to the New York City Department of Health and Mental Hygiene the morbidity and mortality patters of Bushwick and Williamsburg neighborhood has been decreased by 10% in past decade but still has the highest death rate in the NYC. In year 2003- 2004, the average annual death rate in Bushwick and Williamsburg was 15% higher than in Brooklyn and more than 20% higher than in New York City as whole. According to community health profiles of the New York City Department of Health and Mental Hygiene (NYC DOHMH), the causes of death and hospital admission are heart diseases, cancer, aides, diabetes, and homicides (NYC DOHMH, 2006). The primary cause of premature death in area zip code 1126 is cancer, heart diseases, HIV and homicide. The premature death is one that occurs before age 75 and is measured in years of potential life lost.  For example, if a person was 69 when they died, 75-69=6 years of potential life lost.

**Demographics.** Bushwick and Williamsburg have a high poverty rate, which is 38%, the percentage of residents living below the poverty level is higher than in Brooklyn (25%) and NYC (21%) overall. According to the United Census Bureau the total number of people living in Bushwick and Williamsburg in 2010 are 81,677.  The age range of residents, which is 33% of them 17 years old and younger, residents aged 25 and older have completed fewer years of college education than those in Brooklyn and NYC overall which is 25% has college experience education level. This proportion is less than 42% and 47% college experience proportions for Brooklyn and NYC respectively. According to USA city facts sheet the 47.6% of the residents are men and 52.4 of the zip code areas of 11206 residents are females, and unemployment rate is 10.6% whereas nationwide is 7.9%. The majority of Bushwick and Williamsburg residents are Hispanic, which is 53%, black 37%, white 4%, Asian 3% and other 3%(NYC DOHMH, 2006). In this zips code area, according to DOHMH survey people feel unsafe, not adequate housing, supermarket and parks.

**Environmental concerns.** The water, air quality, food, and housing quality are the main Environmental concerns for the residents of area zip code 11206. The major environmental related health problems in area zip code 11206 are asthma, which has emergency department (ER) visits among youth and adults are 270.2 rates per 10,000 residents in year 2012 and heat stress, which has ER visits that is 15.5. According to New York Department of Health survey people feel safe in terms of water supply, food and air quality (New York City Department of Health and Mental Hygiene website, 2015)

           The housing quality is infested with mice, rats, cockroaches, and many cases of bed bugs in this area zip code 11206. Home safety and maintenance that can affect the health of residents such as carbon monoxides incidents where no CO alarm is 7 and NYC is 40 and homes with cracks or holes 21.4% and NYC is 22.7 %. Lead hazard is low level as compared to Brooklyn and NYC (New York City Department of Health and Mental Hygiene website, 2015).

**Public Services.** The community served by zip code 11206 represents the community commonly called North Brooklyn. The highly populated and highly residential area is served by the MTA with numerous train lines and bus routes. Both residents and communities are connected with surrounding communities and boroughs, by the G, J, L, M and Z trains. There are 7 Bus routes that travel through zip code 11206 (MTA Website, 2014). There are 28 Public schools that serves part of zip code 11206. The public schools available for the community are elementary schools and junior high schools. Conventional public schools account for 26 of them and 2 are special education schools. There is 8 private schools in the area, which 7 are conventional schools and 1 is an alternative or also referred to as a special curriculum program of study school. There are five local New York City Police stations serving and protecting this area. Precincts 83, 79, 81, 88 and 90 are all located within a two-mile radius of zip code 11206 (The City of New York Website, 2015). The FDNY serves this zip code with two fire department house stations. The recreation center that serves zip code 11206, offers multiple resources for the community is McCarren Park. It offers seasonal skating rink, basketball courts, baseball, and football fields. There are 9 locations for zip code 11206 that serve as food pantries and soup kitchens. It is at these locations that people within this community can receive free meals. Residents have access to a New York City HRA job center, which is located in Bushwick. The Brooklyn job center located in the Bushwick center offers resources for the unemployed community in zip code 11206. There are several non-profit organizations that are accessible to the people in the community. “Make the Road New York” is a non-profit organization whose mission is to “ build power of Latino and working class communities to achieve dignity and justice through organizing, policy innovation, transformative education, and survival services” (Make the Road New York Organization, 1997). They help other minorities like supporting the gay community. Another nonprofit organization is Scenarios USA; their mission is to support the youth by strengthening academic achievement, promoting civic engagement and support the youth in becoming engaged citizens and healthy individuals (Scenarios USA, 2015). The importance of these nonprofit organizations is to serve the best for their community. There are 9 public libraries located in zip code 11206 (Google Maps, 2014). There is 64 Christian, Baptist and Catholic Churches that serves the zip code of 11206 that are located through Bedford-Stuyvesant and Bushwick. There are various Catholic Churches for the Hispanic community and Baptist churches for the African American community in the neighborhood. There are over 10 different supermarkets and grocery shops available for the community.

**Aesthetics.** There are 10 NYC government parks that include baseball fields, handball courts and play grounds for the community in zip code 11206 (NYC Government Parks Website, 2015). The NYC Government parks offer a program for the community in north Brooklyn and other NYC boroughs called Shape up NYC. This program has multiple locations that offer aerobic and other fitness class for free. In order to have access to these programs, the participants need to be members of a recreation center. There are over 39 different galleries that cover the area of North Brooklyn, which includes Williamsburg, Greenpoint and Bushwick. These art galleries features traditional art, fine art photography, paintings, prints sculpture and other types of visual arts (Brooklyn Art Galleries). Community Board 1 in Greenpoint and Williamsburg had 126 arts and cultural organization in 2011 (City Limits, 2015). The Brooklyn arts council dispenses grants and serves artists and organization throughout Brooklyn and has said it’s trying to create more cultural infrastructure in areas that lack it (City Limits, 2015).

Music festivals and concerts are offered in McCarren Park for the community of zip code 11206. North side media promotes film, art, music in north side Brooklyn, which includes Green point and Williamsburg. North side film offers films for the community in four film venues in Williamsburg. North side is a media group that takes place in North Brooklyn. Its major components are over a course of a week and include music, innovations, and film. There are over 150 restaurants of varies cuisine available in zip code 11206 of North Brooklyn (Yelp Reviews 2014). The Giglio festival is one of the festivals that take place in the neighborhood. It is a 125 year old Italian catholic tradition in Williamsburg, includes a street procession of men carrying a four ton giant on their shoulders, carnival rides, and a bounty of delicious street eats (DNA Info Website, 2012). There are over 70 different bars available in the community as nightlife entertainment (Yelp Reviews, 2014). There are three botanical gardens available for the community in zip code 11206. One of the botanical gardens is part of the recreation center of McCarren Park. The staff in the botanical garden in McCarren Park are mostly volunteers, is a great environment for nature lovers. Within a mile from zip code 11206 there's about 5 cinemas available for the community. The community has access to five different cultural centers. One of the cultural centers teaches French, it incorporates events for the students to connect with the culture.

**Health Related Facilities.** Woodhull medical center has served North Brooklyn for the past 25 years. The zip code 11206 is part of north Brooklyn health network. Woodhull medical center offers various specialties to treat in the community like adult medicine, Emergency room, geriatrics, pediatrics, and women's health. Woodhull’s health network also offers the residents with Community Health Centers for primary care. These off sites centers offer convenient alternatives for pediatrics, adult and women health services for the community in North Brooklyn. There are 4 community health centers affiliated with Woodhull. The community has access to six different children’s center clinics part of North Brooklyn health network. There are 2 school based health centers in the zip code of 11206 linked with Woodhull medical center. Woodhull also has a mental health center, as well as a diagnostic and treatment center in Cumberland available for residents in the community of 11206.

The New York department of health and mental hygiene offers the community with free immunizations and STD testing. One of the clinics of New York department of health and mental hygiene available for the community in zip code 11206 is located in Fort Greene. For adults 19 and over will be asked for insurance in order to bill them with the care provided at the clinic. The clinic won't charge with copayments, although if the patient may prefer to not be charged to their insurance. They will provide you with a sliding scale fee based on family size and annual income. The staff won't ask to proof the family size or incomes of the patient. For the STD testing they offer HIV rapid testing and blood drawn testing for STDs. All the results are confidential - no one has access to the results except authorized personnel in the department. The clinics are available to the community for those with low income, who can't afford care. The vaccinations offered are for children 4 and over, teens and adults. There are eight nursing homes listed in the zip code of 11206. Some of the nursing facilities are rehabilitation centers as well. There are about 10 pharmacies accessible for the community - popular ones being Walgreens and Duane Reade. In the community there are 8 different fitness centers, the most popular ones being Planet Fitness and Blink Fitness (Google Maps Website, 2014). Within the fitness centers there is a YMCA that offers indoor pools, gym equipment and variety of fitness program for the community for free or low cost. The services provided for the community are for all ages from Pre-k to High School Seniors.

**Care Management Techniques**

Care management techniques for 11206 (Bushwick and Williamsburg) includes helping the community with what is necessary and lacking in the neighborhood and this provides information on what improvements are desirable to meet the community needs. Morbidity and mortality rates lead will address pertinent health issues in the community such as cancer, heart disease and HIV/AIDS (New York City Department of Health and Mental Hygiene, 2006). Woodhull has served Northern Brooklyn for over 25 years and provides health screenings and prevention-focused education to over 5,000 community residents (Woodhull Medical Center Community Health Needs Assessment, 2013). Environmental concerns, such as poor air quality and high asthma rates in the community are present. LEAN is a methodology used to eliminate waste from a process and enable continuous improvement; it is HHC’s organizational development and quality improvement system and LEAN is based on principles developed by the Toyota’s Production System (Woodhull Medical Center Community Health Needs Assessment, 2013). Public service safety issues such as neighborhood violence are concerns for the community members in 11206. Violence inside and outside the home affect the entire community, neighborhoods can come together and take a stand against violence in their communities (New York City Department of Health and Mental Hygiene, 2006).

Care management techniques also involve meeting health goals. There are ten health care goals geared toward helping the community of 11206 in the Bushwick and Williamsburg neighborhood (New York City Department of Health and Mental Hygiene, 2006). Goal #1 is to have a regular doctor. Having a health care provider and a regular place of care other than the emergency department (ED) — is a critical component of good health care access; In Bushwick and Williamsburg, residents are more likely to be without a regular doctor (32%) than those in Brooklyn (23%) and NYC overall (24%) (New York City Department of Health and Mental Hygiene, 2006). Goal #2 is to be tobacco-free. Smoking is the leading cause of preventable death in New York City and the cause of many illnesses, including heart disease, stroke, emphysema, and lung cancer; One fifth of Bushwick and Williamsburg residents (20%) currently smoke. NYC DOH aspires to decrease the numbers to 18% (New York City Department of Health and Mental Hygiene, 2006). Goal #3 is to keep your heart healthy. Heart disease has increased in this community in the past decade; Bushwick and Williamsburg residents had an annual heart disease rate that was 50% higher than the Brooklyn rate and 60% higher than NYC overall; NYC DOH encourages 20 minutes of vigorous exercise 3X/week or 30 minutes of moderate exercise 5X/week (New York City Department of Health and Mental Hygiene, 2006).

Goal #4 is to know your HIV status. Bushwick and Williamsburg HIV/AIDS diagnoses is more than 35% higher than NYC overall; and the rate of people living with HIV/AIDS in the community is 55% higher than the rate in NYC overall, NYC DOH desires to reduce this number to 12 per 100,000 residents (New York City Department of Health and Mental Hygiene, 2006). Goal #5 is to get help for depression. One in 10 adults in Bushwick and Williamsburg suffers from serious psychological distress; NYDOH believes when the community offers mental illness institutions residents can get better care and treatments (New York City Department of Health and Mental Hygiene, 2006).

Goal #6 is to live free from dependence of alcohol and drugs. In Bushwick and Williamsburg, 12% of adults report engaging in at least one episode of binge drinking; the death rate due to drugs was 21 per 100,000 people, NYC DOH desires to reduce this number to 8 per 100,000 people (New York City Department of Health and Mental Hygiene, 2006).

Goal #7 is to get checked for cancer. Cervical, colon, and breast cancer rates are about the same for residents in Bushwick, Williamsburg and NYC overall; residents can reduce their cancer risks by never or quitting smoking and getting recommended screenings so treatment can begin early (New York City Department of Health and Mental Hygiene, 2006). Goal #8 is to get required immunizations needed. Flu and pneumococcal vaccinations fall below the targeted number by 30%; Bushwick and Williamsburg residents aged 65+ only have a 53% completion of these vaccinations; NYC DOH desires to target 80% of the population to complete these vaccinations (New York City Department of Health and Mental Hygiene, 2006).

Goal #9 is to make your home safe and healthy. Bushwick and Williamsburg has the highest rates of lead poisoning and asthma than other parts of Brooklyn, and NYC; NYC DOH purposes to eliminate lead poisoning by preventing exposure to lead based paint and other sources of lead; NYC DOH informs us good medical management of asthma can prevent many asthma-related hospitalizations, and patients can work with health care providers to better control their asthma (New York City Department of Health and Mental Hygiene, 2006). Goal #10 is to have a healthy baby. Mothers in Bushwick and Williamsburg are more likely to receive late or no prenatal care when compared to other parts in Brooklyn and NYC; teenage pregnancies are also higher in Bushwick and Williamsburg; infant mortality rates are 8 per 1,000 births and NYC DOH desires to reduce this number to 5 per 1,000 births (New York City Department of Health and Mental Hygiene, 2006).

**Influences on Resource Allocation Decision**

Many factors influence decisions on resource allocation including government funding, patterns of insurance coverage, values and beliefs of the population, and the reliance on influence of special interest groups; every community determines how it allocates resources (Holzemer, S., & Klainberg, M, 2014., p67).Woodhull Medical Center (WMC) is apart of NYC Health and Hospitals Corporation and provides primary service care for Williamsburg, Bushwick and Bedford-Stuyvesant neighborhoods in which there are 403,135 primary care residents living in these areas; it is located in a federally designated primary care Health Professional Shortage Area (HPSA) and provides primary service care to zip code 11206 (Woodhull Medical Center Community Health Needs Assessment, 2013).

Communities receive various levels of government funding for health related resources which determines how services are allocated; many populations have insurance coverage problems and are uninsured or underinsured (Holzemer, S., & Klainberg, M, 2014, p 67-68). Poverty reflects the insurance status of WMC’s patients. WMC receives most of its payments through Medicaid [due to high poverty rates]; discharge services are 9% uninsured or self-pay vs. 66% paid through Medicaid, emergency department visits are 33% uninsured or self-pay vs. 51% paid through Medicaid, and clinic visits are 35% uninsured or self-pay vs. 48% paid through Medicaid (Woodhull Medical Center Community Health Needs Assessment, 2013).

Values and beliefs of the community dictate which types of health-related services of the population want [or need] developed (Holzemer, S., & Klainberg, M, 2014, p67). WMC services an area that is suffering from poverty, low levels of education and poor health status, the majority of ethnicity races are of Hispanic and Black descent and the needs for access to healthcare services in WMC’s communities are high (Woodhull Medical Center Community Health Needs Assessment, 2013).

NYDOH Community Health Survey data shows residents of WMC community have higher rates of diabetes, obesity, hypertension, asthma and tobacco use which is more than NYC as a whole. Hospitals in Brooklyn have closed services or closed completely; this lead to an increase needed by WMC for more ED and in and outpatient services (Woodhull Medical Center Community Health Needs Assessment, 2013). The influence of special interest groups can affect resource allocation (Holzemer, S., & Klainberg, M, 2014, p68). Brooklyn Healthcare Improvement Project (B-HIP) was formed to examine healthcare availability access in Northern Brooklyn, which includes 11206. Assessments were done to identify existing and emerging healthcare needs of the local community so that WMC could develop and support meaningful and effective health support services for its patients (Woodhull Medical Center Community Health Needs Assessment, 2013).

As a result, money was allocated into WMC so the community could have improvements for special interest group services. There are now improved outpatient appointment scheduling, ED services now have extra social work managers, there are increased psychiatry services for behavioral health in/outpatients, there are improved obesity/nutrition/education and exercise services, there are improved mobile crisis management teams with extended hours, more services for children and adolescence for counseling, programs for HIV/AIDS about the illness and prevention, detox services are available for alcohol and drug dependent residents, tobacco cession programs are available for residents 19 years and older for counseling and therapies, better care management of chronic diseases with medication education such as asthma, heart disease and diabetes, there are improvements involving diabetes education including hospital resources, nutrition, ophthalmology, and dental management (Woodhull Medical Center Community Health Needs Assessment, 2013).

**Application: Diagnostic Community Statement(s)**

**Overall assessment of community**

In the community area of Bushwick and Williamsburg in Brooklyn, zip code 11206, diabetes is considered one of the leading causes of death (NYC DOHMH, 2006). It has contributed to a higher mortality rate compared to the overall rates of both Brooklyn and New York City. Factors contributing to existing disparities within the community can be due to its high poverty rate, levels of education, cultures, and availability and accessibility to resources. Several environmental concerns may also be contributing to the overall health of this community.

Thirty-eight percent of the residents living in Bushwick and Williamsburg are living below the poverty level, which is higher compared to other areas of Brooklyn and total rates of New York City. Data indicates residents within this community that are aged 25 and older have completed fewer years of college when compared to all of Brooklyn and NYC. Unemployment rates in this zip code are higher than the national rate of 7.9%. The primary cultures of this community are Hispanic and African American. Many differences exist amongst these two cultures, including diet and exercise. Inadequate housing, parks, and supermarkets have negatively impacted feelings of safety in people living in this area, as well as, the high rate of infestation with mice, rates, bed bugs, and cockroaches. Each of the aforementioned characteristics has an affect on the overall health of this community and the wellbeing of its residents.

**Diagnostic statements with rationale and identified problems**

Individuals with diabetes can lead to many other medical issues such as neuropathy, diabetic foot ulcer, visual impairment and infection (American Diabetes Association). For such reasons, people in the community with diabetes are diagnosed with risk for disturbed sensory perception/disturbed sensory perception, and risk for infection (Ralph & Taylor, 2008). The diagnoses help reduce patient’s sensory deprivation, promoting safety and decreasing the chances of infection. Other nursing diagnoses to the community are powerlessness (Ralph & Taylor, 2008, p. 263). Surveys have shown the communities of Bushwick and Williamsburg contain many possible factors, such as high unemployment, unsafe environment and housing, inadequate parks and supermarkets, contributing to their health and because of these there is a perception of lack of control over the situation and actions taken one one’s own behalf will not affect an outcome). By identifying the concerns, recognizing individual and the community strengths, enhancing and reinforcing positive self-concept, and facilitating problem solving will tackle the issues of powerlessness. There are an overwhelming number of minorities in the community that lack education with a few years in college and with diverse culture that the knowledge of the disease processes of diabetes is limited. The diagnoses of deficient knowledge for the community occur when “absence or deficiency of cognitive information related to a specific topic” is presented (Ralph & Taylor, 2008, p. 689). Intervening in the knowledge deficit of the community encourages healthy decision-making and maintains of wellness.

**Planning and Implementation**

Although the top causes of premature death in zip code 11206 are cancer and heart disease, each totaling 15%, diabetes continues to affect 14% of this areas population, which is higher than the overall percentage for the borough of Brooklyn (10%) and New York City (9%) (DOHMH, 2006). We decided we needed to focus on this disease because it is not only a threat to residents based on its prevalence, but also because reports show that many residents are at high risk for diabetes. According to the DOHMH (2006), both Bushwick and Williamsburg (the two areas covered by zip 11206) are ranked ‘below average’ on health indicators, such as having a regular doctor, being tobacco, alcohol, and drug-free, maintaining immunizations, and participating in activities to maintain overall health, such as screenings. Furthermore, data indicates, that “exercise habits in Bushwick and Williamsburg are less healthy compared to” both Brooklyn and New York City overall – 56% of residents report not exercising at all and only 29% exercise at least three days a week (DOHMH, 2006, p. 7). Lastly, reports show that this area has higher proportions of black and Hispanic residents, 37 and 53 percents respectively, than the borough and NYC overall (DOHMH, 2006). This contributed to our concern of this area being at risk for diabetes because it is commonly diagnosed amongst African Americans and Mexican Americans (American Diabetes Association, 2014). Our research proves that a knowledge deficit regarding diabetes exists within the zip code 11206, and we decided it would be beneficial to the residents for us to focus our project on this disease.

**Goals and/or objectives of the project(s)**

After performing adequate research and arranging several meetings to discuss our different options, we decided to focus our Service Learning project on enhancing the knowledge of the residents of zip code 11206 and provide detailed teaching about the diabetes disease process. Overall, our objectives were to provide clear insight about diabetes and included tasks such as, providing the population with general information and facts about the disease, including the various types (Type 1, Type 2, and Gestational diabetes), and the modifiable and non-modifiable risk factors for each. We also decided to teach the community members about the signs and symptoms, and how to identify when one is in a hypo- or hyperglycemic state. Our objectives also aimed at informing residents about the many complications that being diabetic put one at risk for, and how to prevent or treat them. To conclude our presentation to the community of 11206, we decided to teach and discuss methods of prevention and treatment, such as nutrition, physical activity, and use of medications, which would be beneficial to those diagnosed and undiagnosed with diabetes.

**Date of project, site of project, address where project took place**

Our overall group consisted of 8 people, so we decided to split into two groups (4 in each) to present to the community of 11206. Both presentations took place on April 29th, 2015. One group presented to the staff members of Williamsburg Community Health Center at 279 Graham Avenue, and the other presented to visiting clients at the Geriatric Wellness Center 2AB-121 in Woodhull Medical Center, 760 Broadway. Both sites are located in Brooklyn, New York, and are found within the zip code 11206. The presentation at Williamsburg Community Health Center was done at 9AM and amongst the ten staff members that attended there were three registered nurses, two patient-care assistants, one nurse practitioner, the sites assistant director, and two administrative members. The presentation at the Geriatric Wellness Center took place at 10 A.M. with an attendance of about 20 to 22 patients along with their family members. All four of us did our presentation with the help of Ms. D.R., one of the patient-care assistants, who translated our presentation into Spanish because 95% of the geriatric patients of the center speak Spanish only.

**Community organizations that provided assistance with project**

Our project was conducted without any contributions from community organizations. However, we did provide informational documents that we obtained from organizations such as the American Diabetes Association, the Centers for Disease Control and Prevention, New York Department of Health, Nordisk Pharmaceuticals, Woodhull Medical Center.

**Implementation**

**How the project was implemented/conducted.** Prior to planning the actual presentation delivery, we had to obtain permission and confirmation from our sites managerial staff. Once we were given the dates, times, and locations of when and where we would be presenting we were able to move forward with our planning. It was important for us to know whom we were going to be presenting to, so we could adjust our teaching tactics and communication style accordingly.

Our facilities did not have means of allowing a Power Point presentation so we decided as a group that we would each create a visual prop (poster board) to which we adhered information, pictures, and documents about the different topics we chose to discuss about diabetes. We handed out a pre-test prior to the teaching, which was delivered in four sections (each person covering one): an introduction to diabetes and the types, signs and symptoms, complications, and prevention and maintenance tactics, and then provided attendees with a post-test in order to measure our outcomes and if our teaching was effective.

When implementing our projects at the two sites we had to take a few things into consideration. For one, clients visiting the Geriatric Wellness Center 2AB-121 at Woodhull Medical Center primarily speak Spanish therefore it was important for us to be able to deliver our information to them in both English and Spanish. We had the help of one of the centers employees to translate all information provided vocally (we met with her prior to presenting and outlined what was going to be discussed and how to deliver it in Spanish) and we provided them with Spanish informational documents. Furthermore, clients (attendees) were all over the age of 65, so it was imperative for us to adjust the delivery of our teaching – we had to adjust our tones, our visual props, and the time spent discussing the different topics.

When presenting to the staff of the Williamsburg Community Health Center we wanted to provide them with information that was factual, clear, and to the point. Many of the attendees had clinical training, but there were some that did not, so the information we provided had to be engaging. After we presented the teaching on diabetes, we concluded with a question-and-answer session over bagels and coffee, which we provided.

**Publicity attained/acquired for event(s) coverage.** Any publicity we attained for our event was via word-of-mouth from the staff members at each site. The site manager at Williamsburg Community Health Center gathered most of her staff for the presentation, and at the Geriatric Wellness Center we created a flyer that we gave to the head nurse at the center prior to the date of our presentation. Also, the staff informed the patients as they were coming in that there would be a presentation on diabetes while they were waiting to be called to see the physician, social worker or lawyer.

**Activities engaged/carried out/presented.** As previously noted, the presenters at Williamsburg Community Health Center and the Geriatric Wellness Center presented about diabetes, and included information regarding its epidemiology, the types, signs and symptom, complications, and ways to prevent or maintain a diagnosis. Presenters at the Geriatric Wellness Center provided attendees with both a pre-test, which was recorded prior to the presentation, and a post-test, collected after the presentation. They provided informational pamphlets in both Spanish and English and answered several questions that the attendees had upon completion. The presenters at Williamsburg Community Health Center engaged the attendees by being very interactive, and having plenty of visual information. The pre-test/post-test portion was replaced with a question-and-answer session upon completion of presenting the information. This was done over bagels and light refreshments.

**Means of advertisement.** After discussions amongst the group about how to advertise our presentations, we decided on keeping it simple by creating a flyer and provided several copies to the sites managers. We believed that with the expected attendees flyers would be most beneficial. We have provided a copy of the flyer we created for both sites under the tab “Part V’.

**Cost of Project**

**Description of all costs encountered for project.** Costs encountered for this project included those for supplies to construct the visual aids for the presentations held at both locations within the community of 11206. Costs for these supplies for all eight members totaled near $50. The bagels and fruit provided to the attendees at the Williamsburg Community Health Center cost $21.98, and the supplies needed to construct and compile this binder totaled $51.54. Receipts of cost encountered can be found in the section tabbed ‘Part V’ in the back of this binder.

**Evaluation**

**Goal accomplishment**

During the mid-semester break, the clinical group got together and discussed our objectives for our community presentation. We collectively decided that we wanted the community of zip code 11206 to increase their knowledge about (1) the definition of diabetes, the different types of diabetes and the risk factors associated with them as well as to be able to recognize the signs and symptoms of the disease. We also wanted the community to (2) have an awareness of some of the chronic complications of diabetes such as stroke, heart attacks, diabetic kidney disease, diabetic foot ulcer, and what to do prevent them. At the end of the presentation, we wanted the community to (3) be educated about the different type s of diabetes treatments (diet, exercise, and medications) and the importance of getting their blood sugar checked by doing finger sticks and the hemoglobin A1c test. Last, but not least, the community of zip code 11206 should be able to (4) recognize the signs and symptoms of high and low blood sugar as well as know what to do prevent these problems. However, due to the fact that we wanted to educate as many people as was possible in the community, we decided to divide the group into two subgroups of four and do two separate presentations using the same objectives.

After seeking out different potential sites for our presentations, we were successful in getting permission to use the Williamsburg Community Health Center and the Woodhull Geriatric Wellness Center on April 29, 2015 at 9 am and 10 am respectively. The group then gathered all the information that we could relevant to the topic using a combination of websites, pamphlets, booklets, leaflets that were retrieved from the Woodhull Medical Center as well as its various off site locations. Our group leader, Kristine also went to the American Diabetes Association Health Fair, held on March 2, 2015 at the Jacob Javits Center, New York , New York and collected brochures, charts relating to the topic. All of the information gathered was shared among the members of the group so that the presentations were consistent.

Owing to the fact that none of us spoke Spanish and we wanted to adequately meet the needs of the community at the Geriatric Wellness Center, we collaborated with a bilingual (English and Spanish) speaking nurse from the site to help us with translation during our presentation there. The dates and times for the presentations were subsequently advertised at the respective sites using word of mouth as well as flyers that were written in Spanish or English. Each team member also created poster board(s) or charts that were tailored to the needs of the group being served. Due to the fact that the Woodhull Geriatric Wellness Center is attended by mainly Spanish speaking seniors, therefore the group decided to use large, colorful pictures or drawings that related to the topic being discussed. Each picture was also described in both Spanish and English. The Williamsburg had a younger population that spoke English and was able to utilize a mixture of very effective visual aids.

On the day of the presentations, we had a fair turnout for both locations. Both audiences were first given four pre-test questions that were written in a language that they understood and pertained to the diabetes topic to be discussed. During both presentations, each team member used simple, clear language (English) along with visual aids to explain his or her point. At the Geriatric Wellness Center, we had to resort to the usage of a bilingual speaking patient care technician to help us with the Spanish translation during our presentation as the previously assigned nurse was a no show. Luckily, we came in early to rehearse and was able to do a quick review with her prior to the actual presentation. Nevertheless, the group Geriatric Wellness Center was well engaged as the patients paid close attention to what was being said; some of them were nodding their heads as they listened and even gave a verbal feedback during the presentation. At the end of the presentation, the patients along with the staff gave the group a round of applause. At the Williamsburg Community Health Center, the audience was well equally receptive; they were asking questions and were quite thankful for the enlightenment.

**Project Evaluation**

Owing to the fact that most of the patients at the Woodhull Geriatric Wellness Center were in and out of appointments, we were unable to get all of our pre-test and post test paper work back. However, based on the results of the pre/post-tests returned and the oral feedback received from the patients, it is safe to say that there was knowledge gained due to our presentation. This is invaluable knowledge that the patients could utilize in their own diabetes disease management or share with their family members or friends in the community. Similarly, the staff that observed the presentation done at the Williamsburg Community Health Center, could now apply the knowledge gained in the care of their own patients. Overall, change might not be immediately obvious in the diabetes health status of the people in zip code 11206, however at the very least the Woodhull Clinical group listened to the voice of the community and planted a seed that could bear fruits in years to come.

**Narrative and Self-Reflection**

Please see the narrative and self-reflection of each team member included in this binder under the tab ‘Part VI’.

References

American Diabetes Association. (n.d.). *Complications*. Retrieved from http://www.diabetes.org/living-with-diabetes/complications

American Diabetes Association. (n.d.). *Type 2*. Retrieved from http://www.diabetes.org/diabetes-basics/type-2/?loc=db-slabnav

Brooklyn Art Galleries and Brooklyn Gallery Guide. (n.d.). Retrieved from http:\\artcollecting.com/galleries\_ny\_brooklyn.htm#greenpoint

Brooklyn, NY- 11206. (2015). Retrieved April 10, 2015, from

<http://www.google.com/maps/vt/data=RfCSdfNZ0LFPrHSm0ublXdzhdrDFhtmHhN1u->

M,F0hvlsMAx6suthT\_gKoBZpVADHlCELkrqmInQ5RdPvTbBXgw6VspOmjLQrCw4pn5g9B05AWlLfoXz9wUacmC0JdRQqFTukTpOSgntbT05EVbO3sqxz2HTsBESi2dPldhoCts0VK7fywSujNwHYFWQn6s2UdO1TMvPQeY9YWUymOJbzWU7MKGgFYvNm

City Limits Organization. (2015). Retrieved from http://citylimits.org/2015/01/08/in-brooklyn-art-scene-some-neighborhoods-are-out-of-the-picture/

City on kid's death: Mistakes do happen. (2007). Retrieved April 10, 2015, from

http://www.nydailynews.com/news/city-kid-death-mistakes-happen-article-1.267906wxkiNzH-8hxzphmAh6vUc82p6lYZDj6BXsg

DNA Info: Williamsburg, Bushwick and Greenpoint Local Neighborhood news. (2012). Retrieved from http://www.dnainfo.com/new-york/20120713/williamsburg/best-outdoor-festivals-music-shows-brooklyn

Google Maps. (2014). Retrieved from https://www.google.com/maps/place/Brooklyn,+NY+11206/@40.702486,-73.9425224,14z/data=!4m2!3m1!1s0x89c25bf9880bce89:0x2879c30100cb4758

Holzemer, S., & Klainberg, M. (2014). *Community health nursing*: An alliance for health

(2nd ed.). Burlington, MA: Jones & Bartlett Learning.

Make The Road New York Organization. (1997). Retrieved from http://www.maketheroadny.org/

New York City Department of Health and Mental Hygiene. (2006). Take care bushwick and williamsburg. (2ND ed.). *NYC Community Health Profiles*, 18(42), 1-16.

New York City Department of Health and Mental Hygiene. (2014).

http://www.nyc.gov/html/doh/downloads/pdf/data/2006chp-211.pdf

New York City Government : Brooklyn Job centers. (n.d.). Retrieved from http://www.nyc.gov/html/hra/html/services/job\_centers\_brooklyn.shtml

New York City Government Parks. (2015). Retrieved from

http://www.nycgovparks.org/programs/recreation/shape-up-

New York City Government: Woodhull Medical Centers (n.d.). Retrieved from

http://www.nyc.gov/html/hhc/woodhull/html/centers/centers.shtml

North Side Media Group. (n.d.). Retrieved from http://www.northsidefestival.com/info/

New York City Department of Health and Mental Hygiene. (2006). Take care bushwick and williamsburg. (2ND ed.). NYC Community Health Profiles, 18(42), 1-16.

Ralph, S.S., & Taylor, C. M. (2008). *Nursing Diagnosis Reference Manual* (7th ed.). Philadelphia: Ambler.

The New York City Department of Health and Mental Hygiene. (n.d.). Retrieved from

http://www.nyc.gov/html/doh/html/living/std-clinics.shtml

The City of Churches Organization :Brooklyn (n.d.). Retrieved from http://brooklynchurhces.org

Woodhull Medical Center Community Health Needs Assessment. (2013).

http://www.nyc.gov/html/hhc/downloads/pdf/community-assessment/hhc-chna-woodhull.pd

Yelp Reviews. (2014). *Zip Code 11206*. Retrieved from http://www.yelp.com

11206 Zip Code Detailed Profile. (n.d.). Retrieved April 10, 2015, from

<http://www.city-data.com/zips/11206.html>

11206, NY Population. (2013). Retrieved April 10, 2015, from

<http://www.usacityfacts.com/zip-code-11206/population/>

Woodhull Medical Center Community Health Needs Assessment. (2013).

http://www.nyc.gov/html/hhc/downloads/pdf/community-assessment/hhc-chna-woodhull.pdf