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Healthy People 2020 Community Project:
Influenza Vaccination in Elderly Adults
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Community nursing is becoming a vital component of successful nursing. After all, a community is nothing more than a microcosm of a larger city or state, and therefore, the health of the community is often a good indicator of the overall health of the larger macrocosm. If these community links are weak in terms of healthcare infrastructure, then they will certainly stress the larger central framework. Good nursing can use targeted interventions to foster successful outcomes on specific segments of a residential community, uplifting the healthcare of a whole class of individuals. In this paper, I discuss the flu and its effects on the elderly in my community. I propose a community vaccination program for the elderly based on the goals of the Healthy People 2020 initiative.

The Flu Virus: A Brief Discussion

The flu is a highly contagious and can often set off epidemics within communities, arousing major health concerns worldwide. Each year, new strains appear, making this virus both a virulent and bothersome illness that makes many people sick each year. One of the main problems with the flu virus is that its genetic composition allows it to mutate often. Two methods exist by which the different flu strains can alter each season: the first is the antigenic shift, and the second is the antigenic drift, the first one being the more radical of the two alterations (CDC, 2014). Patients infected by the flu usually experience a host of symptoms, ranging from chills and fever, to body aches and pains, to other debilitating effects like vomiting and diarrhea. These symptoms can last for more than a week and can be compounded—especially in older adults—with other diseases they might have. As well, older adults might have compromised immune symptoms because of attendant maladies, like diabetes, arthritis, hypertension, and others, which

make fighting a flu infection all the more difficult. Thus, conditions like these make a flu

vaccination program for the elderly all the more important. A vaccination program makes

catching the flu harder—and if caught—usually less severe and thus easier on the immune

system ("Flu + You," n.d.).

Flu Outbreaks

There have been several major flu outbreaks throughout history. Such worldwide pandemics

have literally caused millions of deaths. Some of the better known of these outbreaks include the

one of 1918-1919, which wiped out 50 million people world-wide and infected 20-40% of the

entire global population. The flu outbreak that occurred during the period 1957-1958, which

came in two waves, killed 69,800 people in the United States, most of whom were senior

citizens. In 2009-2010, a new strain, known as the Swine flu, broke out and caused the death of

upwards of 40 million people ("Pandemic," 2016). The flu can be deceptive, coming in multiple

waves that strike without warning. This was the case in 1918 and 2009, when a second more

dangerous strain came after the first. A second attack like this occurred in 1918 in Maryland and

wreaked havoc on the populace (Mamelund, Haneberg, & Mjaaland, 2016).

Identification of Community

In this paper, a flu vaccination program for the elderly is developed for implementation in

the Bensonhurst section of Brooklyn, New York. The program was developed in line with the

Healthy People 2020 initiatives for senior citizens and rolled out under the auspices of the local

councilman. Because of these considerations, this paper treats of a program to vaccinate the

elderly against the flu in a section of the borough of Brooklyn, New York. This region of

Brooklyn is located in the southwestern part of this borough.

Assessment of Needs and Risks

Clearly, the flu virus is one that needs attention. The virus not only presents major health problems but also kills many people each year. When a major outbreak occurs—which can happen at any time based on historical records—there is even more concern. Based on the literature, the flu is particularly dangerous to the elderly. For example, research by Jayasundara, Soobiah, Thommes, Tricco, and Chit, (2014) found that the manner in which the virus came upon the population was a crucial factor in determining both the success and cost-effectiveness of public health interventions. By studying this infection process, community nurses can plan vigorous programs to vaccinate segments of the population. Such a plan would take these individuals out of the line of attach from the flu and possibly save their lives.

The high number of senior citizens within Bensonhurst made this a good town in which to implement a flu vaccination program. Consider the following statistic: only 65% of all elderly adults, 65 years or older, got flu shots for the 2013-2014 season (CDC, 2016). If this percentage of unvaccinated (approximately 35%) were equated to the Bensonhurst senior population, then about 30,000 elderly adults are not getting their yearly flu shot. This program, therefore, will not only benefit many unvaccinated seniors, but also encourage seniors to participate in a community outreach for better overall health education. For this reason, this flu program has the backing of key community members, including the local councilman, Mike Treygar, of Bensonhurst.

Population Economic Status Assessment

The population median income in the Bensonhurst community is approximately \$45,000 versus a median income of \$57,000 for New York (City-data.com, 2016). According to the statistics on the same site, Bensonhurst has a poverty rate which is somewhat higher than New York overall, coming in at 18.5% versus 16.0% for the entire state. In spite of this, this neighborhood boasts

some very high real estate prices, with the average price of detached homes costing over \$1.2

million dollars versus about \$300,000 in the rest of the state.

Disaster Assessment and Planning Assessment

As part of New York City, Bensonhurst would fall under the umbrella of hazard mitigation as

promulgated by the Department of Emergency Management. Broadly defined, hazard mitigation

is any cost-effective and sustained action taken to reduce the long-term risk to human life, property,

and infrastructure from disasters and other hazards (NYC, 2016).

Neighborhood/Community Safety Inventory

Bensonhurst is a pleasant community with ample schools, parks, and other community features.

Bensonhurst park is a large city park on Gravesend Bay, featuring baseball fields, tennis and

basketball courts, as well as a children's playground. The public education system of

Bensonhurst comprises several elementary schools, including P.S. 128 and Public School 112, as

well as New Utrecht High School and some private academies. In terms of education, 32% of the

residents are college educated, 40% are high school graduates, and 28% have less than a high

school diploma ("Brooklyn," 2015).

Bensonhurst has generally low crime rates, coming in at fourth on the list of crime

statistics maintained by DNAinfo.com's Crime & Safety Report. Only 69 major crimes per

10,000 residents were committed in the calendar year 2010 in the 62nd Precinct, which covers

the area. Unlike some other areas in New York, crime in the Bensonhurst neighborhood has

continued to decline steadily, with major crimes down 77% from 1993 to 2010 (Bensonhurst,

2011). Based on these statistics, it is safe to say that this community enjoys a low crime rate.

Cultural Assessment

The cultural features of Bensonhurst are as follows: about 40% of the population is White, about 25% Asian, about 12% Hispanic, about 1% Black, and the remaining is a mixture of Pacific Islander and Native Hawaiian as well as other races (City-data.com, 2016).

Windshield Survey

The community chosen on which to do a windshield survey is the Bensonhurst section of the borough of Brookyn in New York. This community was examined with the goal of pinpointing a prevailing health condition for an underserved segment of the population.

Bensonhurst is an urban neighborhood in Brooklyn with a population of about 200,000. The Bensonhurst area traditionally includes the neighborhoods of Bath Beach, Gravesend, and Mapleton. The principal ethnic demographics are as follows: White, 48%; Asian, 36%; 1%; Hispanic, 13%; African American, 1%; and other races, 1% ("Brooklyn," 2015). The life expectancy is 82.5 years and the residents who rank their health as excellent, very good, or good exceeds 70%; 15% of the population is over 65 years of age ("Brooklyn," 2015).

The community assessment was performed using two key survey methodologies: 1) the techniques of a windshield survey—often used by nurses and health professionals to cover a large area; and 2) the face-to-face, or live-person interview. Historically, the windshield survey is a popular data collection method used in industry. Surveyors in fields like transportation use this method to assist with major projects, and although this method can be inefficient, time-consuming, and unsustainable (Zhou, Qi, & Wang, 2015), for the Bensonhurst assessment, this type had minor limitations. Several live-person interviews were conducted to establish a personal connection with the participants and get to feel the "live pulse" of the community. Face-to-face

interviews generally have excellent response rates; furthermore, this strategy is highly valued because of the type of information gleaned (Keough & Tanabe, 2011).

Scavenger Hunt

Before we discuss the actual flu program that was devised for the Bensonhurst community, we first look into the characteristics of this neighborhood and consider such features as community facilities, population demographics, and other community aspects. Bensonhurst is part of Brooklyn Community District 11, one of 59 community districts in New York City. The New York City Department of Health, which is located in New York City, is the main health agency that oversees all New York related health issues and concerns. The scope of this agency is comprehensive and includes services related to the acquisition of birth and death certificates, dog licenses, vaccines and flu shots, food safety certification, HIV medications, and immunization records (NYC Health, 2016). According to the facility website, their objective is to prevent disease and promote physical and mental well-being for the residents within the five boroughs of New York City. This objective is achieved via effective policy development, disease detection, prevention, education, and enforcement.

Regarding food pantries, Bensonhurst has several: Reaching Out Community Services is a social services organization and is located at 7708 New Utrecht Ave; the Bensonhurst Council of Jewish Organization is a religious organization and is located at 8635 21st Ave # 1B; and Bnai Raphael Chesed Organization is a non-profit organization and is located at 1741 McDonald Avenue. All of these organizations are involved in distributing food to the needy. Bensonhurst offers a rich assortment of religious centers for worship, including the Jewish Community Center of Bensonhurst, Bensonhurst Baptist Church, and Our Lady of Guadalupe Church. In terms of fire protection and control, the New York City Fire Department - Engine 330/ Ladder 172 serves

Bensonhurst, and is located on 2312 65th Street. This fire department is actively engaged in the protection of citizens from fire in homes, schools, places of worship, and businesses. This department accomplishes this by promoting public fire education, comprehensive fire safety inspections, and aggressive fire attack. The Bensonhurst neighborhood offers two YMCAs, which offer after-school care, athletic services, and recreation. Although Bensonhurst does not have its own Planned Parenthood office, the neighborhood avails itself of the one in the neighboring borough of Staten Island, New York. The Bensonhurst Senior Center is one of three senior centers located in and around this area of Brooklyn.

Interpretation of Data

By studying this infection process, community nurses can plan vigorous programs to vaccinate segments of the population. Such a plan would take these individuals out of the line of attach from the flu and possibly save their lives. Because of these considerations, this paper proposes a program to vaccinate the elderly against the flu in Bensonhurst, a neighborhood with a population of 199, 579 residents located in the southwestern part Brooklyn, New York.

The latest statistics collected by the city of New York on the Bensonhurst neighborhood reported that 15% of the neighborhood's residents are 65 years of age or older (www1.nyc.gov). According to the Institute on Aging, 13 percent of the national population was 65 years or older in 2010 in the United States. The life expectancy in Bensonhurst is 82.5 years compared to 78.8 years on average for the United States as a whole as reported by the CDC. Bensonhurst is 48% white, 36% Asian, 13% Hispanic, 1% Black and 1% other while New York on a whole is 44.6% white, 11.8% Asian, 27.5% Hispanic, 25.1% Black and 16.5% other. Comparing economic statistics, 18% of Bensonhurst residents live at or below the federal poverty level whereas 21% of New York residents are considered at or below poverty and the official poverty rate for the

United States as a whole is 14.8 percent (<u>www.census.gov</u>). The injury assault rate in Bensonhurst is less than half of that of the rest of New York, with 25 non-fatal assault hospitalizations per 100,000 as compared to 64 per 100,000. Seventy percent of Bensonhurst residents self-reported that their own health is "excellent", "good", or "very good", slightly less than the 78% of New Yorkers on average.

Based on the assessment of the all the data, and given the consideration of the Healthy People 2020 goals, the Bensonhurst community is in need of a flu vaccination program for the elderly. According to the NYC Health Community Health Profile of 2015, only 34% of Bensonhurst residents got vaccinated against the flu as compared with 40% of all New York residents. The virus not only presents major health problems but also kills many people each year. Influenza is the third most common cause of death in Bensonhurst at 29.5%, higher than New York's overall 27.4% of deaths caused by influenza. Based on the literature, the flu is particularly dangerous to the elderly.

One of the barriers to the simple preventative tool of influenza vaccination in Bensonhurst is an inability to access to health care due to a lack of health insurance. One in five adults in Bensonhurst has no health insurance and one in ten goes without needed medical care and attention. Although these numbers are decreasing in the neighborhood and nationwide due to the 2014 Affordable Care Act, 20% of all New Yorkers still have no health insurance coverage and 11% report that they went without needed medical care in the past year. The lack of access to health care institutions, screenings, and preventative medicine can lead to unpleasant and costly outcomes. These may include avoidable hospitalizations, and as we concentrate in this community project, preventable illness and deaths for Bensonhurst's elderly due to diseases such as influenza.

Top Three Problems in Relation to Healthy People 2020 Goals

The Healthy People 2020 initiative has promulgated key objectives for senior citizens.

This mandate is all-inclusive, taking into consideration the number of different factors that affect the health, function, and quality of life for the elderly. Healthy People 2020 has declared the following factors of utmost importance in considering the health of the elderly:

- 1) Behaviors of seniors are crucial to health outcomes; activities like exercise, selfmanagement, and the use of preventive services (like the flu shot) can improve overall health; and
- 2) Access constraints—such as to housing and transportation services—can affect the ability of older adults to get help for their medical needs; people from minority and poorer segments of the population tend to be in worse health and use healthcare less frequently ("Older adults," 2016).

With these goals in mind, the top 3 problems for this community is getting the necessary preventive health care measures, like annual flu shots, getting more exercise, and getting more education on wellness and general preventive measures for senior citizen optimal health. In order to improve health for the Bensonhurst senior population, a flu vaccination plan will accomplish several objectives. Among these—care coordination and management, establishment of quality measures, and analysis of appropriate training for providers—will be crucial. This last objective will see that the nurses and other healthcare volunteers involved will have the tools needed to effect appropriate care to the seniors. According to the Healthy People 2020 report, in 2012, only 39% of senior females were current with preventive health measures ("Older adults," 2016). This statistic shows that 60% of the elderly women are not receiving defensive care, and a flu shot

falls within this category. Consequently, the focus of the vaccination program will be flu shots

for this underserved segment—both males and females.

Availability of Community Resources for Selected Problem

There are adequate resources in the community to effect this flu program. For one, the

local town hall is willing to sponsor this program in any way possible, up to and including,

financial sponsorship. From an insurance perspective, the Medicare Part B permits an allowance

for 95% of the Average Wholesale Price (AWP) of flu vaccination, as reflected in the published

record ("Seasonal," 2015). Since the majority of seniors in Bensonhurst are covered by this

insurance, the cost to get vaccinated should not be a problem.

Regarding the community-wide program, there will be additional costs associated with

outfitting the flu centers. These costs will be associated with things like band-aids, rubbing

alcohol, and other daily supplies. Also, there will be an expense associated with leasing out the

flu center space. The space will consist of an approximate 250 square feet at \$150/(sq. ft.)—

based on a real estate evaluation. Costs tied to the printing of the flyers (See Flu Vaccination

flyer, sponsored by the CDC) will be \$3,000 (5,000 brochures and hand-outs @ an average of

\$0.60/piece). A budgetary proposal was submitted to local councilman Michael Treygar of

District 11 of Brooklyn, for support and sponsorship of this initiative. As a result, an

appropriation was subsequently made to the state health department. The appropriation was

approved for \$5,500 for the 2016 season, and \$6,500 for the 2017 season, subject to participation

by at least 50% of the senior community.

Primary Prevention Topic

As was stated previously, the flu is particularly dangerous for elderly adults. It is not uncommon for the flu to cause death in senior citizens. The reason for fatality is that the flu can complicate other diseases and maladies attendant in the person. For sure, the estimated yearly number of deaths caused by flu virus since the 1970s has been tied to the disproportionate growth of the elderly population, who accounted for 90% of fatalities caused by the flu (Domínguez et al., 2016). Clearly, a flu shot program for the elderly in Bensonhurst, Brooklyn is compelling given the available facts and information. Moreover, vaccination for the elderly is an important factor toward negating the impact of the flu within the community (Domínguez et al., 2016).

Nurses should strive to provide education on topics like health, to furnish interventions that can improve physical condition, and to give yearly vaccinations against the flu. Such actions will assuredly promote lasting change among seniors. The Bensonhurst community, for this reason, will be engaged in a resident-wide flu vaccination program for adults aged 65 and older. Based on the windshield assessment, a compelling program was put together to begin vaccinating these individuals. Toward this end, a number of specific actions were taken: a team of assistants was assembled; flyers were created, printed, and posted in local areas; and some sites within the community were located, where the vaccinations will be given. The main goal of the Bensonhurst program is to augment flu shots to 60% of the 30,000 seniors the first year, and then increase this number steadily, so as to get to 100% as nearly as possible.

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Vaccination Flyer

