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Increasing Seasonal Influenza Vaccine Rates in a Black Inner City Population

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This is to certify that the doctoral study by

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2016

Abstract

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MS, Long Island University, 2001

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Project Submitted in Partial Fulfillment

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Doctor of Nursing Practice

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Abstract

The seasonal influenza (flu) vaccine has been shown to prevent flu outbreaks that can cause debilitating effects on the body and even death. Underserved members of Black communities are more likely to refuse the flu vaccine than are persons of other ethnicities. The purpose of the project was to determine from a needs assessment the reasons for flu vaccine refusal in the Black population of an inner city clinic in order to develop tailored communication and nursing actions that promote awareness of the flu vaccine's importance and safety. The health belief model constructs (perceived susceptibility, perceived severity, perceived benefits, and perceived barriers) were used to guide the project. A survey based on the constructs of the health belief model was administered to a convenience sample of 40 adult patients in an inner city clinic who completed the anonymous survey while they waited for the physician. Descriptive statistics showed that adults ages 18 to 36, who were the largest group of respondents (*n* = 33), agreed to be vaccinated and believed the flu to be a serious disease for their age group. Reported barriers to vaccination included finding time to get vaccinated and the belief that the vaccine causes the flu. The findings supported development of an annual seasonal flu vaccine campaign that included verbal and written education, informational posters, social media messages, and a standing order to offer and administer the injection to all adults served by the practice. Social change implications are expected to include decreased morbidity and mortality from flu among the Black inner city patients and closer alignment of the clinic with the Healthy People 2020 vaccination goals.

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Dedication

This paper is dedicated to Dr. Pierre-Jerome and staff at the Premier Medical Clinic in Jamaica, Queens who contributed to completing this project and allowed me to make a positive change for the patients.

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I acknowledge Dr. Bell in the DNP program at Walden University, who served as a guide and mentor throughout the capstone proposal and project.

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Section 1: Introduction

Seasonal influenza (flu) commonly affects people during the fall, winter, and spring months causing debilitating effects, especially among the young and elderly. The flu virus is transmitted through speaking, singing, coughing, and sneezing and affects the respiratory system. The virus is from the Orthomyxoviridae family of a single strand ribonucleic acid (RNA). There are three types of flu virus according to Hart (2015), which are A, B, and C, with Types A and B causing seasonal influenza.

The human body usually can clear the disease on its own after a week or more with symptoms such as bodily aches, fatigue, coughing, and fever. However, long-term complications can develop such as pneumonia, resulting in death. People at risk include the young and elderly; the immunocompromised; pregnant women; the morbidly obese; people over age 19 taking aspirin long term; people living in long-term care facilities; people affected with other lung diseases, hypertension, and diabetes; and people with certain brain disorders (Hart, 2015). The flu virus can live on surfaces for a few weeks, underlining the importance of hand washing in flu prevention.

The Advisory Committee on Immunization Practices (ACIP), the federal government organization responsible for reporting immunizations to the Centers for Disease Control and Prevention (CDC), reported in 2013 the recommendations for the 2014 to 2015 flu season (as cited in Grohskopf et al., 2014). The recommendations included offering of the vaccine by health care providers during routine physical exams when it becomes available. Nagata et al. (2011) reported that globally an estimated one billion cases of flu occurred causing three to five million cases of severe illness and

300,000 to 500,000 deaths. Nagata et al. reported that immunization against flu is a very important public health issue. The vaccine should be given before the beginning of the flu season, preferably by October (Grohskopf et al., 2014). Health care providers should offer the vaccine to foster compliance with national recommendations and to improve the vaccination rate. The vaccine rarely causes a severe anaphylactic reaction even in persons with an egg allergy. However, some reactions have been reported to the Vaccine Adverse Event Reporting System according to Groshskopf et al. (2014). If only hives are experienced, the vaccine can be given with observation after the person is vaccinated and if anaphylactic medications are readily available.

Even with these recommendations and precautions in place, there remains a high refusal rate for the vaccine in the Black population. The refusal reasons reported to me in my nurse practitioner practice are "I will get the flu from the vaccine, I will get sick, it's a government conspiracy, and I never get the flu." The low vaccine rate may also be attributed to medical providers not offering the vaccine, there not being a standing order for vaccine administration, and not having an adequate supply of the vaccine on hand (Yoo et al., 2011). All of these patient, provider, and setting associated issues were seen in the clinic where this project took place. Limited vaccine supplies can increase disparities in influenza vaccine rates, according to Yoo et al. (2011), as vaccine accessibility creates a barrier for access. A large amount of vaccine was not ordered at the project clinic because it was expected that many patients would not accept the vaccine. The clinic had no resources such as pamphlets or handouts on the flu and its prevention

with vaccination, and no information about the flu vaccine was provided to patients by the medical assistant staff.

There was not a standing order from the clinic physician to offer and administer the flu vaccine, so the medical assistants administering the vaccine could not offer or administer the vaccine. Patients or the physician had to ask specifically for the vaccine to be given. Zimmerman, Albert, Nowalk, Yonas, and Ahmed (2011) found approximately a 16% increase in immunization rate when standing order programs were implemented.

Problem Statement

The problem addressed in this Doctor of Nursing Practice (DNP) project was the high influenza vaccination refusal rate among Black patients in an inner city clinic. The local relevance was that this clinic serves a large Black population with a low vaccination rate recorded in the flu vaccine log.

Local Nursing Practice Relevance of the Problem

As a member of the community, I know that culture plays a big part in vaccination refusal. This clinic serves adult patients age 18 and older with most patients being age 50 and older. The clinic does not employ any registered nurses (RNs); it is staffed by nursing assistants. Without RNs, the clinic has no staff or other health care workers available to offer education regarding the flu vaccination except for the single physician on call and in the clinic on Thursdays. An RN staff member would be able to offer evidence-based resources and education about the vaccine, address doubts about the vaccine, and suggest that importance of vaccination. An RN could assist in administering the vaccinations and could maintain a flu education program each flu season.

Disparities in flu vaccine acceptance and refusal rates have been studied. Wooten, Wortley, Singleton, and Euler (2012) discussed the perceptions and beliefs about the vaccine among elderly White, Black, and Hispanic Americans. The most important factors related to flu vaccine acceptance were beliefs about influenza and perceived susceptibility to the flu virus. Other factors that influenced refusal of the vaccine included education level, lack of information about the flu and the virus, influence of family and friends, limited insurance coverage, mistrust of the medical facility, lack of public awareness, and misconceptions as described above.

Significance for Nursing

Nurses may experience similar concerns as patients about the flu vaccine and may refuse the vaccination. This issue was a subject of discussion while I worked for previous employers. Hospitals develop standing orders for administering vaccines. Long-term care facilities abide by their state's health department guidelines. Nurses in the outpatient setting can recommend standing flu vaccine orders; guidelines for vaccination can be retrieved from the Internet, printed journals, and live seminars if there are no government mandates, as was the case for the privately owned clinic site of the project.

Purpose

The purpose of the doctoral project was to determine the reasons for flu vaccine refusal in the Black population of the clinic in order to develop targeted approaches to improve the flu vaccination rate.

Gaps in Practice

Gaps in practice occur when the flu vaccination is not offered to patients and continue when no action is taken despite health care providers' knowledge about immunization and the targeted population of people who need it most. More engagement is needed for health care providers to influence the flu vaccine rates. Immunization programs in outpatient clinics are needed. Nursing staff in these facilities can form a dedicated team and start a vaccination campaign during the flu season each year. The gaps can be eliminated when population-specific programs are created for all patients. An intended result would be that upon entering the clinic, all patients except those who cannot have the flu vaccine due to documented reasons in the chart will be offered the vaccine.

Guided Practice-Focused Questions

1. What are the findings of a needs assessment survey about patient knowledge and perceptions related to the flu vaccination and their reasons for refusing the vaccine?

2. What are the recommendations for a campaign aimed at improving flu vaccine adherence among adults in an inner city clinic based on findings of a needs assessment and a review of the literature?

Project Addressing the Gap-In-Practice

The capstone project addressed the gap-in-practice by incorporating patients' perceptions as to why they chose not be vaccinated in the past and ways the clinic could influence a behavior change. Lack of awareness and education about the vaccine is creating negative perceptions about the vaccine. Hammond and Holcomb (2015) mentioned that negative perceptions are caused by negative experiences and side effects, but place the population at risk for infection. Additionally, some health care sites do not have the vaccine readily available.

Nature of the Doctoral Project

The design of the project was descriptive. A survey used in previous research was implemented to collect data from a group of adult patients in an urban clinic setting to determine their perceptions of influenza and their intent to be vaccinated against the disease.

Sources of Evidence

The sources of evidence were the needs assessment survey that was used to gather patients' responses regarding their perceptions of the flu vaccine and a literature review from online databases.

Approach for Organizing and Analyzing Evidence

The approach in identifying, analyzing, and organizing the evidence was a computer search for the reasons related to the low vaccination rate in an underserved population, underuse of the flu vaccine, and interventions to improve compliance among

African Americans in a clinic setting. The data from the needs assessment survey were entered into a spreadsheet, and frequencies of responses were reported.

Project Purpose Statement

The connection between the gap in practice and the proposed capstone project is that, based on the findings of the needs assessment and literature review, the clinic will be able to develop initiatives for staff and patients that will increase the clinic's vaccine rate to align with Healthy People 2020 goals.

Stakeholders

The stakeholders for this clinic are two medical doctors who also own two other primary care clinics. The stakeholder who is frequently at this capstone project's clinic is a cardiologist who sees patients of his own on Thursdays. Because they are stakeholders and the flu vaccine is one of the required measures by Medicare and major health plans, an improvement in the flu vaccination rate was a desired outcome. Stakeholders such as health care providers understand that negative perceptions of the flu vaccine can increase the refusal rate and the potential for a flu epidemic in an a vulnerable population where health disparities are found.

Contribution to Nursing Practice

The doctoral project may contribute to nursing practice through the dissemination of findings in journals, educational facilities, places of employment, health care organizations, places of worship, and community centers. Other needs assessment-based programs can be developed to promote awareness and vaccination compliance in different neighborhoods, among different populations, and in small outpatient clinics.

Hart (2015) suggested nurse practitioners can increase vaccination rates by communicating about the low risks associated with vaccination protection against the high risks for developing yearly flu. Nurses must have knowledge about the vaccine, get vaccinated themselves, and be aware of the symptoms of the flu virus to educate the public effectively.

Project's Contribution to Similar Practice Settings

Other private clinics and settings may benefit from the project's results. Pharmacies administer the vaccine. An awareness campaign can be targeted toward the Black population in the communities where the vaccine rate is low. Pharmacists can offer the vaccine for free or at a low cost for the uninsured. The vaccine manufacturers may also benefit from the project's results. They, too, can provide awareness for the underserved communities where flu vaccination rates are low and offer free vaccination campaigns. Other practice settings such as hospitals, home care agencies, health plans, and schools may benefit from the project results. The literature indicating the reasons for not being vaccinated may be considered when developing programs targeting populations in other settings.

Implications for Positive Social Change

A standing order can increase compliance with offering the vaccine to everyone. Federal and State information must be visible in clinics. Social online networks, which are a growing trend in today's world, can be used to influence behavior change. Information about the flu vaccine can be posted on any website. People may be more willing to be vaccinated if they understand the purpose and what they will receive, as

well as the social acceptability of being vaccinated. The CDC (2014) provided buttons and badges for the public to influence flu vaccination. This graphic representation of vaccination compliance can be used to demonstrate social support for vaccination. All clinics can adopt reporting of their flu cases and vaccination rates to the CDC's routine flu surveillance systems and to the public. Social media and social pressure may play a part in flu vaccination campaign activities.

Summary

To increase the flu vaccination rate in this population, public awareness and knowledge are vital. The project clinic may make evidence-based changes such as creation of standing orders and adoption of guidelines for the flu vaccination. Zimmerman et al. (2011) reported that standing orders are not used frequently in the outpatient setting, and if used in disadvantaged communities, they can decrease disparities. In the clinic where the project was conducted, over 1000 patients are served by five medical assistants and one physician (a nurse practitioner will be hired); the physician is the only person offering the vaccine. With an electronic medical record, standing orders should be easy to incorporate into practice and could be effective if the medical assistants use them. The statistics of the low vaccination rate may play an influential role in the promotion of increased immunization against the flu.

Section 1 presented an overall discussion of the problem, the project purpose, and the significance of the project to stakeholders, the nursing profession, other practice settings, and public health. In Section 2, I discuss the literature search process, describe

the studies reviewed, and present the theories and models that were used to guide the project.

Section 2: Background and Content

The practice problem was the high refusal rate of the flu vaccine in the Black population of an inner city clinic. The purpose of the doctoral project was to determine the reasons for flu vaccine refusal in the Black population of the clinic in order to develop targeted approaches to improve the flu vaccination rate. The theoretical model, the project's relevance to nursing practice, the background and context of the study, the role of the DNP-prepared nurse, and a summary are included in this section.

Literature Review Process

I conducted an Internet search via Google Scholar and the Walden University Library using to search terms *refusal of the flu vaccine in Blacks*, *African Americans, and clinics*; *seasonal flu vaccine rates in Blacks*; *flu vaccine rates in Queens, New York ,and Jamaica, Queens*; and *standing orders for flu vaccine*, which yielded research on adult flu vaccination, refusal of the vaccine, social determinants of flu vaccination, standing orders for the flu vaccine, acceptance rates, vaccine supplies, and perceptions of the flu and the vaccine. Only studies addressing one or more of these topics were included in the literature review. All studies were conducted on adults, including the elderly age 65 and older, because 90% of flu deaths in the United States occur in this group (Wooten et al., 2012). The literature search resulted in 20 studies with most focusing on participants age 65 and over, flu vaccine disparities, and perceptions. Nine articles of the 20 along with information from government agencies such as the CDC and NYC Department of Health were considered.

Concepts, Models, and Theories

The health belief model (HBM) was a suitable framework for explaining behaviors, perceptions, and the likelihood a person will change. The model was developed in the 1950s by psychologists Hochbaum, Kegeles, Leventhal, and Rosenstock for underserved populations to understand the refusals of preventive screening (Griffin, 2011). The theory was based on Lewin's belief that a person's reactions are due to his or her beliefs and psychological contentment with his or her current state. This model suggests a person's behavior in adopting a health action change is based on his or her perceptions. It is the health care professional's responsibility to change that perception, if negative or maladaptive, so behavior change efforts can promote optimal health. Hodges and Videto (2011) listed four concepts of this framework:

- *Perceived susceptibility* and *perceived severity*: Together these concepts create alarm if unhealthy behaviors continue such as not being vaccinated. The alarm or fear is a perceived threat such as an adverse reaction from the vaccine.
- *Perceived benefits* and *perceived barriers*: Adapting the healthy behavior of being vaccinated must outweigh the risks such as a reaction to the flu vaccine to create action. Cues to action can be anything to remind the person of the healthy behavior and the risks of not adhering to this healthy behavior.

The HBM was developed to describe and change beliefs regarding health behavior. Researchers have used this model for promoting behavior change toward immunizations, including the flu vaccine. Shahrabani and Benzion (2012) discussed the model in relation to the perceptions of the flu vaccine. These perceptions included

susceptibility to the flu, beliefs about the flu's severity, belief in the vaccine's effectiveness in prevention of the flu, and the barriers to receiving the vaccine. Shahrabani and Benzion found that a person's belief about the vaccine is influenced by previous experiences with it. If the flu was contracted after having the vaccine, patients may not receive the vaccine because they feel it caused the flu. Increasing education targeted toward reducing identified knowledge deficits may address the perceived benefit domain of the HBM and may play a role in vaccine acceptance.

Terms in the Doctoral Project

The following terms provided the basis for the project constructs.

Disparity: An inequality in influenza prevention that occurs when there is a low vaccine supply or delay in vaccination for vulnerable populations, causing a barrier to access (Yoo et al., 2011).

Seasonal influenza (flu): A severe viral illness that results from contracting circulating Type A and/or B influenza virus (Hart, 2015).

Standing order: A medical order written by a licensed provider prescribing a medication, or a clinical order allowing nonphysician clinic staff to give the vaccine (Zimmerman et al. 2011).

Relevance to Nursing Practice

The relevance to nursing practice is for nurses to communicate the results of this project to promote awareness of the importance of being vaccinated among the African American adult population, and for nurses and medical assistants to agree to be vaccinated to encourage others to do so.

State of Nursing Practice and Improvement Recommendations

Nurses who are expected to comply have their own beliefs about not being vaccinated. Nursing staff can infect patients. According to Sullivan (2010), nurses were found to cause a nosocomial flu outbreak in a 12-bed transplant unit where four patients were infected when three of the nurses assigned to the unit had the virus. Sullivan noted that the neither the patients nor the staff were vaccinated against the flu. It is recommended for nurses to acquire knowledge about the flu virus to educate the public about the reasons for vaccination against the flu and to abide by their organization's program for staff vaccination.

Strategies for Addressing the Gap in Practice

Strategies to increase vaccination rates and decrease the gap in practice were mentioned in several studies. One study indicated standing orders as one means to improve rates and provider prompts or reminders as another. Zimmerman et al. (2011) noted that the CDC recommended a standing order for vaccination, which was shown to increase the vaccination rate more than education and physician reminders. There was no standing order at the project clinic, and patients had to request the vaccine. Standing orders are not frequently used in outpatient settings with only 33% of physicians out of 220 using these orders (Zimmerman et al., 2011). The Centers for Medicare and Medicaid Services (CMS, 2014) found that 46% of Blacks reported receiving the vaccine, in comparison to 45% of Hispanics and 67% of Whites. A variety of reasons for these low rates include ethnic and cultural beliefs and values, low educational status, lack of information about the flu and the vaccine, and lack of health care provider communication (CMS, 2014).

Humiston et al. (2011) examined another strategy for addressing the flu vaccination gap in practice among inner city adult seniors. Humiston et al. tested the usefulness of patient tracking and provider prompts for improving flu vaccine immunization rates in two groups of seniors (a study group and a control group). The study group had an immunization rate of 64% in comparison to 22% for the control group. Implementing the strategies of standing orders and provider prompts may promote awareness and increase vaccination rates.

Advancing Nursing Practice

This doctoral project may advance nursing practice by addressing gaps in practice. A standing order may increase the likelihood that patients visiting the clinic will be offered the vaccine. Patient tracking of who received the vaccine and who did not may reduce the time needed to identify the unvaccinated with an electronic medical record (EMR) database and issue reminders. The clinic for the doctoral project uses only a written log for the vaccinated, and the log can be lost or misplaced; the clinic has an EMR that could be used to issue targeted reminders to providers and patients. Nurses may address the different forms of the vaccine if there is a fear of the injectable form, and this approach may increase compliance. Adopting a needs assessment may address disparities in an underserved population in communities where the vaccination rate is low.

Background and Context

Many Blacks refuse the flu vaccine for various reasons, in comparison to Whites who are more likely to be vaccinated against the flu. Yoo et al. (2011) reported 34% of

African Americans receive the flu vaccine. The clinic for the capstone project usually does not have enough flu vaccine and has no standing orders for its administration. When patients request the vaccine, they are directed to a pharmacy if there is not an adequate supply of the vaccine in the clinic. Patients are rarely offered the vaccine, and there is no available literature in the clinic regarding the importance of being vaccinated. Similar studies indicated similar findings about the low vaccination rate in Blacks and how standing orders can increase vaccination.

Institutional Context

The context of this project was the community where predominantly Blacks reside and where there are disparities for health care. The New York City (NYC) Department of Health and Mental Hygiene (DHMH, 2014) reported a low vaccination rate in communities including Jamaica, Queens (the neighborhood where the project took place) compared to the overall vaccination rate of 53% among Blacks in NYC. The clinic is small with a single physician and medical assistants on duty. Patient flow is usually high as walk-ins are allowed. The opportunity to offer patients the vaccine can be easily overlooked due to the work flow being hectic. When triaged by the medical assistant prior seeing the physician, the patient can be offered the vaccine, if a standing order is in place. The flu vaccine log indicates the number vaccinated, which is low in comparison to the number of patients seen each day. When the vaccine is offered, patients often refuse with various reasons given. No education is provided to the patient as to why the vaccine is necessary, especially for patients who are elderly and have multiple comorbidities.

New York City Context

Jamaica, Queens has a population of 285,600, a poverty level of 16%, a college education rate of 20%, a 33% uninsured rate, a 20% adult obesity rate, and a 10% diabetes rate according to the NYC Department of Health and Mental Hygiene (DHMH, 2006). The DHMH (2006) also reported that 60% of the residents are Black and 38% are foreign born. The number of deaths before age 75 ranked 27th among the 42 neighborhoods in NYC (DHMH, 2006). The flu vaccine refusal rate varies among age groups 18 and up. In 2012, 62% of New Yorkers ages 65 and older reported receiving the vaccine, which was well below the national target of 90%. The percentage of 50 to 60 year olds who received the vaccine was even lower at 43%, and the percentage among 18 to 49 year olds who received the vaccine was the lowest at 32%. These data indicate that there is a problem in NYC and in Jamaica, Queens, specifically.

Role of the DNP Student

There are disparities seen in minorities refusing the flu vaccine. A lack of education about the flu and the vaccine is evident in the target clinic population. The high flu vaccination refusal rate in the clinic, the lack of consistent offering of the vaccine, the lack of a sufficient vaccine supply, and the lack of standing orders presented an opportunity to assist this clinic in providing targeted interventions to improve flu vaccination.

Project Role

My role in this project was the project lead. Given the clinic's large number of elderly patients who are prone to contract the flu and die from complications, it was my

duty to conduct a needs assessment and create an annual flu vaccine campaign for this community who are serviced by the clinic. I was able to incorporate the standing order, provide waiting room wall posters and printed literature, ensure the clinic staff follow-up on having enough vaccine for the season, and recommend that all patients be offered the vaccine regardless of refusal history. The needs assessment added information about the refusals of the flu vaccine and provided the basis for continued flu vaccination promotion interventions each flu season. The flu virus can cause severe illnesses and death. With reports of the H1N1 epidemic a few years ago and having personally experienced flu symptoms, I can attest to the need for preventive measures. Better knowledge about the vaccine and the virus is needed to increase the vaccination rate, and I was able to encourage individuals to get vaccinated as a nurse practitioner and someone who has experienced the flu.

Potential Biases

Biases may be encountered where the scheduled patients may have an opportunity to be vaccinated before the walk-ins as the vaccine supply may not be enough to cover all. Another bias may be the elderly and immunocompromised who may be offered the vaccine first because they are at high risk for flu complications. In these instances, enough vaccine supply is necessary. All patients should have access in receiving the vaccine.

Summary

The literature review supported that vaccine refusal is due to multiple factors. The best way to increase the vaccination rate is a nursing intervention that includes education

by means including social media, standing orders, provider and patient prompts, community involvement, and having enough vaccine on hand to accommodate all patients. There are regulations and guidelines available for clinics to access as needed regarding vaccination rates in any region and suggestions for improvement measures readily available for nurses. In Section 3, I describe the project's approach, design, method, data collection, data analysis, and the evaluation plan.

Section 3: Collecting and Analyzing Evidence

The problem addressed in this DNP project was the high influenza vaccination refusal rate among Black patients. The purpose of this project was to identify reasons for the flu vaccine refusal rate in the Black population. This project was conducted in a community clinic serving a mostly Black adult population with multiple chronic diseases. There were no awareness efforts regarding the flu vaccine, the vaccine was not routinely offered, vaccination rate was low in this clinic, the vaccine supply was usually low, and only a few patients agreed to the vaccination when it was offered. Reasons for vaccination refusal varied and there appeared to be a possibility to increase the vaccination rate with targeted education.

The local problem was the refusal of the flu vaccine among the Black population and possible disparities contributing to this problem. A survey was conducted to gather information for addressing the low vaccination rate in the 2016 flu season. It was evident that patients were not being offered the flu vaccine by the medical assistants, and the literature indicated a high refusal rate within the Black population as one of multiple health disparities among this population.

The gap in practice was addressed by conducting a needs assessment survey and using the findings to create a targeted campaign for flu vaccine awareness in the clinic population. The campaign aimed to change behavior related to vaccine uptake by changing misperceptions and fears about the vaccine.

Project Purpose

The purpose of the project was to tailor communication and nursing actions at the clinic to promote awareness of the flu vaccine's importance and safety based on the information from the needs assessment. A summary of the patients' perceptions and perceived reasons for refusing the vaccine was developed from these data, and a campaign was initiated to change vaccine acceptance behaviors.

Sources of Evidence

The sources of evidence for the project were the literature review and the data that were collected from the patients who completed the short survey. A review of the literature indicated that several approaches had been used with African American patients to increase flu vaccination uptake, including social media, standing orders, provider and patient prompts, community involvement, and having enough vaccine supply on hand to accommodate all patients. The patients were asked at clinic visits to provide information from their viewpoint about reasons for accepting or rejecting the annual flu vaccination. Both sources provided credible evidence that could be used in developing the first annual flu campaign in the clinic.

Evidence Collection and Analysis

The evidence collected from the clinic patients was expected to provide reasons similar to those found in the literature for the Black population; however, it was important to verify the reasons so that interventions could be based on current data. The newly collected evidence was used to offer ideas on how to improve flu vaccination

uptake. A survey based on the health belief model's constructs was used to collect adult patients' perceptions related to the flu vaccine.

Participants

The population for the project included patients who attended the clinic for their primary health care needs. The inclusion criteria were as follows: adults over 18 years of age; males and females; English speaking; any education level, socioeconomic status, or religious status; and agreement to participate. Consent was assumed when the surveys were returned to a folder located in the clinic. The sample included all patients who consented at the time of their visit to the clinic regardless of flu vaccination status. The only exclusion criteria were people under the age of 18 and persons who could not read and write English.

Data Collection Procedures

Clinic patients were asked to complete the survey as they waited for the clinic physician. The survey was offered over a 1-month period between March 2016 and April 2016. The subjects' perceptions of why they would or would not get vaccinated and their knowledge of the flu virus's complications and its contagious nature were collected. The collection of these data and their analysis provided an explanation for flu vaccination refusal at the project clinic.

The potential participants were informed that the survey data were anonymous and their names and personal medical information would not be collected. I created the demographic survey (Appendix A). The needs assessment survey (Appendix B) was taken from the literature (Cheney & John, 2013). The respondents completed the surveys, which

took 10 minutes or less, while they were waiting to be seen by the physician. The needs assessment survey was designed to explore the reasons for refusing the vaccine or being skeptical of its effectiveness. A medical assistant assisted with clarifications and questions from the participants. The HBM constructs in the survey were perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived harm, and cues to action (Cheney & John, 2013). The cues to action reported by the respondents were used to determine the measures that could be taken by the clinic to encourage patients to receive the vaccine.

The completed surveys were collected at the end of each week, and I entered the data into a Microsoft Excel spreadsheet. The respondents were informed about the project by the project lead (me), the office physician, and the medical assistants who were the first to communicate with the clients when they walked into the clinic. Patients who had been vaccinated previously and who agreed to be vaccinated again this year received reinforcement on the importance of the vaccine.

- Preprinted surveys were handed out in the waiting room. A survey sample size of over 100 participants was expected in a period of 30 days.
- Responses were totaled and reported by question and demographics from the survey. A tally of the most frequent responses for refusing the vaccine was reported.
- Surveys were provided in English. All patients over the age of 18 were invited to participate. The only excluding criteria were refusal to participate, age under 18, or inability to read and write English. Walden

University Internal Review Board (IRB) approval was obtained before data collection. The IRB approval number is 06-20-16-0470776.

- The vaccinated and unvaccinated patients were routinely documented. The rates from the 2014-2015 season were to be compared to those from the current 2016-2017 season to determine the effectiveness of the clinic's efforts to improve flu vaccine uptake. Due to the timing of the project, the comparison of rates after the needs assessment and targeted clinic campaign were done after the project completion.

Summary

Contracting the flu remains an economic and social burden, especially in low-income and Black populations. Policies and practices should highlight these disparities and include strategies for improvement. Determinants of the problem are systems, individuals, and health care providers. Nagata et al. (2011) listed advertising campaigns, mailings, standing orders, telephone calls, education, outreach programs, and community participation as means to improve flu vaccination awareness. I expected that this project would influence the vaccination rate for the 2016-2017 flu season.

The results of the project can be shared in medical and nursing publications, with other patient care organizations, within the public sector in places such as churches and pharmacies in the community, and with vaccine manufacturers. I expected the vaccination rate could be improved with the increased awareness of the vaccine due to the clinic campaign and the standing order for vaccination. The survey results provided the basis for tailored methods to increase the vaccination rate. Staff may help to identify

who needs the most education. The results of the project can be compared to similar studies on the reasons for the Black population to decline the flu vaccination. The goal of this project, however, was not to compare racial/ethnic groups' reasons for refusing the vaccine, but to assist the clinic in increasing the vaccination rate in all groups so that the vaccination rate of the population could more closely approximate the Healthy People 2020 goal.

Because the vaccine is not mandatory, refusals after education should be respected. Educating people about the disease and its complications is the initial step toward increased acceptance of the vaccination. The clinic increased the vaccine on hand for the 2016-2017 flu season because the stock was not sufficient the previous year, and the clinic anticipated that more patients would agree to be vaccinated in 2016-2017.

Section 4: Nature of the Project

The Black population of an urban medical clinic presented with a low seasonal influenza vaccine rate. Reasons given by patients for the refusal of the vaccine included "I will get the flu from the vaccine" or "I will never get the flu." At the beginning of the project, the clinic did not have a flu vaccine campaign, usually did not enough supply of the flu vaccine, had no standing orders in place for medical assistants to offer the vaccine, and only the single clinic physician offered the vaccine. The gaps in practice included patients not being offered the vaccine consistently despite the providers' awareness of the immunization and the need for Black inner city patients to be vaccinated. The purpose of the doctoral project, therefore, was to determine reasons for the refusal of the flu vaccine at the clinic serving a large Black and immigrant patient population so a targeted approach could be developed to improve the vaccination rate. The practice-focused questions were:

1. What are the findings of a needs assessment of patients' knowledge and perceptions related to the flu vaccine and their refusals?
2. What are the recommendations for a campaign to improve the flu vaccine adherence rate in an inner city clinic based on the needs assessment results from a survey and the literature review?

Sources of Evidence

The first source of evidence was the literature review that addressed previous efforts to increase patient compliance with flu vaccination and reasons for flu vaccine refusal. Then, I used a needs assessment survey to collect clinic patients' responses in

relation to their perceptions of the flu vaccine. The questionnaires were left in a folder in the waiting room of the clinic to be completed and returned in a closed folder with no identifying patient information. I collected the surveys at the end of each week for 4 weeks. I documented the responses to the survey for data analysis in tables (Appendix C and Appendix E).

Findings and Implications

Forty adult patients (36 females and four males) completed the needs assessment survey. Thirty-three of the respondents were between the ages of 18 and 39, five were between the ages of 40 and 64, and two were age 65 and older. Thirty-five respondents had a high school education, four had a college degree, and one was educated at less than a high school diploma. Two respondents were non-Hispanic Whites, two were Hispanic/Latinos, and 36 were African Americans. The four respondents who reported never having been vaccinated against the flu were one non-Hispanic White and three African Americans. Two non-Hispanic/Latinos and 34 African Americans reported having been vaccinated against the flu at least once. Refusing to be vaccinated for the fall 2016 flu season was reported by only four respondents who were African Americans. Most respondents agreed to be vaccinated in the 2016 flu season; this group of respondents included two Hispanic/Latinos, one non-Hispanic/White, and 37 African Americans. One African American reported maybe.

Two of the four African American respondents who indicated that they would not be vaccinated this year provided reasons for not getting vaccinated. One of the African American respondents stated “I still caught the flu after my last flu shot in 2005/2006 and

I got the flu shot in 2010 and twice in 2013." The other African American stated "not interested in receiving the immunization." The non-Hispanic White who had never been vaccinated against the flu responded to this question that "everyone I know gets sick after getting the flu shot."

Information was also collected about the medical issues of the respondents. One of the non-Hispanic White respondents reported having no medical problems and was not a cigarette smoker, and the other reported having hypertension, diabetes, and high cholesterol, but was not a tobacco smoker. One Hispanic/Latino had hypertension and diabetes, and was a cigarette smoker. The second Hispanic/Latino reported no medical problems but was also a smoker. Among the African American respondents, seven had hypertension and diabetes, one had high cholesterol, and 28 had no medical problems. The medical problems were collected as an indicator of an increased risk for contracting the flu virus and suffering adverse outcomes from the disease. Appendix C provides a summary of these data.

Appendix E presents the "strongly agree" responses to each of the health belief model constructs. In response to the health belief model construct *perceived susceptibility*, only two of the respondents indicated that they strongly agreed that they were unlikely to contract the flu. This finding indicates that most respondents believed that they were at risk for contracting the flu. On the two questions related to *perceived severity* ("Influenza is a serious illness for my age" and "Influenza is a serious illness for the elderly"), 32 respondents strongly agreed with both statements. There was more of a spread in opinions related to the construct of *perceived benefits.* All of the respondents

reported that they would receive the flu shot if they were sure that it prevented the flu. Thirty-five respondents stated that they would get the flu shot to prevent spreading the flu to other people, while 30 respondents preferred receiving the flu shot to contracting the flu. However, 50% (n = 20) of the respondents felt people do not get the flu from the flu shot and only half of the respondents strongly agreed that the flu immunization always prevented the flu. Thirty respondents strongly agreed that the physician and staff at the clinic thought patients should receive the flu shot. A *perceived barrier* to receiving the flu shot was difficulty in finding the time to get vaccinated; half of the respondents strongly agreed with this statement. Many respondents strongly agreed with the *perceived harm* statements; 63% (n = 25) respondents strongly agreed that the flu shot causes the flu and all respondents worried about side effects from the vaccination. Cues to action for getting the flu shot were physician recommendation, news of a bad flu season, and family wanting the respondent to have the flu vaccine; 75% (n = 30), 88% (n = 35), and 75% (n = 30) respondents respectively strongly agreed with these statements. See Appendix E for the data table. These results were expected to vary more due to personal experience and knowledge about the flu vaccine. The differing levels of agreement with the HBM statements demonstrated limited variation in perceptions from the clinic's population. However, these findings pointed out opportunities to develop the targeted annual seasonal flu vaccination program anticipated by the clinic.

Unanticipated Limitations

I expected a larger number of participants to complete the survey. The low response rate could have been because of the lower numbers of clinic appointments

during the summer months or because the clinic staff were busy with other duties and not offering the questionnaire to the majority of the patients sitting in the waiting room. The staff reported some patients reviewed the survey and took it out of the clinic to be completed at home; none of these questionnaires were returned.

Another unexpected limitation was the larger number of young adults (ages 18 to 39) replying to the surveys in comparison to older adults who compose more of this clinic's patient population. Older adults are more prone to contracting the flu virus and are more likely to be severely affected. Nagata et al. (2011) reported 90% of deaths related to the flu occur in persons age 65 and older.

Implications of the Findings

The HBM constructs surprisingly provided more positive than negative feedback on agreeing to obtain the flu vaccination. Most of the Black respondents replied that the vaccine was a perceived benefit and they would get vaccinated if influenced by their doctor, family, and negative news about a bad flu season. The replies provided enough information for the clinic to move forward with a first annual seasonal flu vaccine campaign for increasing the vaccination rate. Perceptions to consider in developing the campaign were perceived barriers to obtaining the vaccination and the universally perceived harms of the flu vaccine. Most participants replied that it was difficult finding the time to get vaccinated and that they worried about contracting the flu after receiving the flu shot. With the high number of respondents indicating that they would respond positively to the doctor or staff expressing a belief in getting vaccinated, a direct

approach by the physician or a staff member could be a factor in vaccine acceptance. According to these data, the use of standing orders may increase the vaccination rate.

Implications for Positive Change

The survey results indicated that the clinic staff should be able to increase compliance with the flu vaccination by implementing a standing order that will be used in the fall of 2016 (Appendix D). Federal flu vaccine posters are now visible on clinic walls and patients will be informed about social networks such as Twitter and Facebook by clinic staff as the flu season nears. Social networks are growing trends today, which can influence behavior change. The information gathered by this needs assessment will be useful in the other clinics owned by the same stakeholders. A news report of the vaccine campaign might be useful in the target area and the increase in vaccination rates will be important for the CDC's routine surveillance systems.

Recommendations

The major recommendation for the clinical staff is to insert a standing order in all charts when patients arrive. With this standing order, the medical assistants must offer the vaccine to all patients and the office staff must ensure that enough vaccine supply is available for the season. In addition, each flu season the office staff can play a waiting room video about the importance of getting vaccinated. An influenza vaccine information statement (CDC, 2015) can be given to all patients as they register at the front desk to see the physician. The CDC information statement provides reasons for the vaccine, its adverse reactions, and the importance of getting vaccinated against the flu. Finally, provider prompts and patient medical record alerts are recommended when the staff log

into the computer daily and when they bring up patient charts. These prompts will be a reminder of the flu vaccine campaign in progress, and the alerts will target those patients who have not been vaccinated.

Doctoral Project Team and Roles

The team members included the office staff (medical assistants, physician, and me). The medical assistants were responsible for reminding patients about the project, their voluntary participation in the survey, and their contribution to improving practice. The physician was responsible for overseeing that all patients were made aware of the project. I collected the surveys weekly for data entry and analysis. A study done on learning and innovation in nursing teams showed contextual factors play a part in team learning (Timmermans, Van Linge, Van Petegem, & Denekens, 2012). Therefore, I conducted a meeting with all staff to discuss the findings of the survey and to describe the reasons patients gave for agreeing or refusing to get vaccinated. This feedback will be incorporated into the first annual flu vaccine campaign to increase the vaccination rate at the clinic.

Extending the Project Beyond the DNP Project

The findings reported in this project will be shared with the United Healthcare (UHC) health plan that is required by Medicare to report vaccination status of clinic patients, discussions with patients, or offering of the flu vaccine. The insurance plan can develop a similar needs assessment program using surveys for members regarding their perceptions of vaccination. Information will be shared with UHC, and I will suggest a needs assessment or similar program be adopted by the health care plan. UHC offers

services in various clinical settings including the home, which should facilitate universal offering of the flu vaccine.

Strength and Limitations

The results of the needs assessment in this project revealed the perceptions of a small sample of patients from a different age group than is generally surveyed. This was unintentional, but an important strength of this project. The findings suggested that awareness of the need for the flu vaccination may be high among adults younger than 40 years of age. Purposeful offering of the flu vaccination to this group of patients when they come into the clinic for other reasons may address the barrier of finding time to be immunized. A second strength is that the clinic has committed to incorporating a standing order starting in the 2016 flu season. The number of young adult respondents who reported considering the vaccine or believing in its effectiveness has implications for the future of vaccination rates in the community. The responses showed that younger patients intend to receive the vaccination. These age-related findings may indicate that the messages about flu vaccination are reaching the younger adults and may be effective due to the better education and health literacy of these patients as well as fewer language barriers. However, more awareness is needed in the clinic staff to improve follow through by the patients. If the flu vaccine is not offered, the patients may not obtain it due to time constraints. Additionally, special and different efforts may be needed to increase vaccination rates among elderly patients. A needs assessment targeting the older adult and elderly Black patients of the clinic may be beneficial in developing these interventions.

Limitations are that behavior cannot be changed unless there is a desire to change. Some respondents were fixed in their decision to not get vaccinated, and it may be difficult to change their beliefs. However, changing the social climate and environment may initiate a behavior change (Cheney & John, 2013). The small sample size was an additional limitation. A larger sample size, particularly among persons over the age of 40, might have provided results that could be useful in targeting the flu campaign to reach older adults and the elderly.

Recommendations for Future Projects

Future projects may incorporate a model that focuses on behavior change for individuals who are not willing to adopt healthy behaviors. One useful model is the Lewin change theory, which is a psychological theory used in nursing that incorporates three stages to influence behavior change: unfreezing, change, and refreezing. Change is likely as the individual is led into a desired behavior (Petiprin, 2016). When a behavior is restrained, the behavior is hindered, leading the behavior in a reverse direction. A larger sample size could produce more information about reducing uncertainties about the safety and effectiveness of the flu vaccine that could be used in subsequent annual flu vaccination campaigns at the clinic.

Section 5: Dissemination Plan

To disseminate the findings to the clinic staff and stakeholders, I conducted a group discussion incorporating the ideas and suggestions generated by the needs assessment for increasing the flu vaccination rate. Literature about other projects and information from the CDC were introduced along with the project's results. I suggested the clinic continue to use the surveys each flu season to gather changing perceptions about the flu and the vaccine to target more accurately the messages of the flu campaign. The stakeholders own two other clinics, and the information can be shared at these clinics. A medical assistant can be designated to lead the project each season by ensuring the standing order is placed in each chart when a patient signs up for a physician appointment. The lead medical assistant must ensure that enough vaccine is supplied to the clinic and all patients are offered the vaccine. One problem that may occur after the project completion is that clinic staff will not continue to support the actions to address the problem. A clinic champion will be needed to ensure continuity of the project.

The information from the project will be offered in a poster format in 2017 at the annual summit my employer hosts for the employees. This summit provides learning opportunities for improving patient care. Nurse practitioners are welcome to display posters about their capstone projects after DNP completion.

Analysis of Self

As Practitioner

The nurse practitioner role provided me with advanced knowledge in health promotion and disease management for various health issues. Complex decision-making

enhanced my competencies to expand my role of provider and educator to include mentor. The mentor role provided an added benefit to a patient care setting serving hundreds of clients in need of education and awareness about the significance of the flu vaccine.

As Project Manager

Overseeing the project, I brought awareness of the evidence-based studies on the flu vaccine disparity in the Black population to the clinic staff and contributed to improvement in health care delivery to a vulnerable population, possibly cutting health care costs due to decreased influenza cases this flu season. The DNP education assists advanced practice nurses in incorporating evidence into practice while improving health care. Gasalberti (2014) addressed self-confidence in nurses after professional development, and reported self-directed professional growth was evident after graduation and was a means to self-assess.

The project has provided motivation for others, including the community, who needed awareness of the problem of low vaccination rates. Upon completion of the project, I worked with the clinic staff to implement an annual seasonal influenza vaccine program to increase the vaccination rate in the community. Posters will remain on the walls throughout the clinic, printed handouts from the CDC will be distributed to all patients, the standing order will be placed in all charts, and adequate supplies of the vaccine will remain in the clinic for the season. The clinic staff accepted the assistance for the patients, and the medical assistants had little knowledge of the flu and the vaccine prior to the project. My long-term professional goal is the continual professional

participation in projects where society will benefit, such as volunteering in places of worship and community centers.

As Scholar

The insights gained on this scholarly journey included the benefits of a needs assessment project for a clinic to increase knowledge of the clinic staff regarding the perceptions of the patients. The HBM constructs provided insights into how clinic patients felt about the vaccine and their fears of receiving it. Information about the target population's perceptions may differ from providers' ideas regarding these perceptions, which can provide institutions with important insight and evidence for program development that will match community perceived needs.

Summary

This clinic serving a large Black and immigrant population needed a strategy to increase awareness of the importance of seasonal influenza vaccination. According to the literature, this population historically has a low flu vaccine acceptance rate. The DNP project provided a means for knowing how the community felt about the vaccine. The questionnaire results indicated the patients' perceptions of the HBM constructs regarding acceptance of the flu vaccine and perceived benefits of the vaccine. Being aware of this information, the clinic will most likely see an increase in the vaccination rate if the agreed upon vaccine standing order protocol is implemented consistently during the annual flu season. According to my project findings, most participants ages 18 to 39 planned to get vaccinated. The clinic can continue to spread awareness of the vaccine's

importance among this group and focus more attention on the older adult and elderly patients in future campaigns.

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Appendix A Participants Variables

1. Gender Male Female

2. Age Group 18-39 40-64 65+

3. Education High school College Less than high school

4. Ever been vaccinated Yes Never

5. Ethnicity Non-Hispanic White African American Hispanic/Latino

6. Ever received the flu shot Yes No

7. Plan to get the flu shot this year Yes No Maybe. If you answer No or Maybe, what are your reasons for not getting vaccinated?

8. Chronic health problems Hypertension Diabetes High cholesterol Other

9. Smoke tobacco or cigarettes Yes No

Appendix B Questionnaire*

Health Belief Constructs	Strongly Disagree	Disagree a little	Agree a little	Strongly agree
Perceived susceptibility				
I don't think I'm likely to get the flu				
Perceived severity				
Influenza is a serious illness for my age				
Influenza is a serious illness for the elderly				
Perceived benefits				
I will get the flu shot if I were sure it prevented the flu				
I will get the flu shot to stay healthy				
I would get the flu shot to prevent spreading the flu to other people				
I would rather have the flu shot than getting the flu				
People do not get the flu from flu shots				
Flu shots almost always prevent the flu				
My doctor or the staff think I should get the flu shot				
Perceived Barriers				
It is difficult for me to find the time for a flu shot				
Perceived Harm				
The flu shot causes the flu				
I worry about the side effects from the flu shot				
Cues to Action				
I would get a flu shot if my doctor recommends it				
News of a bad flu season would influence me to get the flu shot				
I would get the flu shot if my family wanted me to				

*Questionnaire adopted from Cheney and John (2013).

Appendix C Participants Variables Responses

Gender **Age Group**	Male 4 18 - 36 33	Female 36 40 - 64 5	 65+ 2
Education	High School 35	College 4	Less than H.S. 1
Ever Been Vaccinated	Yes 36	Never 4	
Ethnicity	Non-Hispanic White 2	African American 36	Hispanic/Latino 2
Received Flu Shot	Yes 33	No 7	
Planning for Flu **Shot**	Yes 35	No 4	Maybe 1
Health Problems	Yes 11	No 28	No answer 1
Cigarette/Tobacco Use	Yes 2	No 38	

Appendix D Flu Vaccine Standing Order

Influenza Vaccination Standing Orders

Page 1 of 1

*required for sav
^conditionally requi

*Facility ID:		(*Imprint patient information or place patient label here)
DO NOT VACCINATE (Check one) □ Patient is less than 6 months old. □ Patient has been previously vaccinated.		
*Vaccine offered: □ Yes □ No	^Influenza Subtype: □ Seasonal □ Non-seasonal	*Vaccine declined: □ Yes □ No
Reason(s) vaccine declined (Check either section A or B but not both)		
A. Medical contraindication(s) (Check all that apply): □ Allergy to vaccine components □ History of Guillian-Barre syndrome within 6 weeks of previous influenza vaccination □ Current febrile illness (Temp > 101.5°F) □ Other (specify): _____	B. Personal reason(s) for declining (check all that apply): □ Previously vaccinated this season □ Fear of needs/injections □ Fear of side effects □ Perceived ineffectiveness of vaccine □ Religious or philosophical objections □ Concern for transmitting vaccine virus to contacts □ Other (specify): _____	
*Orders: □ Vaccinate □ Do NOT vaccinate □ Standing order – no signature required		
^Physician signature:		
*Vaccine administered: □ Yes □ No	^Date Administered:	

^Type of influenza vaccine administered:

Seasonal: □ Afluria® □ Agriflu® □ Fluarix® □ FluLaval® □ Flumist® □ Fluvirin®
□ Fluzone® □ Fluzone High-Dose® □ Fluzone Intradermal® □ Other (specify): _____

Non-seasonal: □ Other (specify): _____

□ Live attenuated influenza vaccine (LAIV) e.g., nasal □ Inactivated vaccine (TIV)
^Manufacturer: _____ ^Lot number: _____

^Route of administration: □ Intradermal □ Intramuscular □ Intranasal □ Subcutaneous

Vaccine Information Statement (VIS) Provided to Patient:

□ Live Attenuated Influenza VIS □ Inactivated Influenza VIS □ None □ Unknown Edition Date: _____
/_____ /_____

Vaccine ID of Person Administering Vaccine: Title:
Name: Last: First: Middle:
Work Address: _____ City:
_____ State: _____ Zip code: _____

Assurance of Confidentiality: The voluntarily provided information obtained in this surveillance system that would permit identification of any individual or institution is collected with a guarantee that it will be held in strict confidence, will be used only for the purposes stated, and will not otherwise be disclosed or released without the consent of the individual, or the institution in accordance with Sections 304, 306 and 308(d) of the Public Health Service Act (42 USC 242b, 242k, and 242m(d)).

CDC 57.134 v6.6

Appendix E Health Belief Model Questionnaire Results

Health Belief Constructs
Perceived susceptibility *I don't think I'm likely to get the flu* • Strongly agreed - 2 **Perceived severity** *Influenza is a serious illness for my age* *Influenza is a serious illness for the elderly* • Strongly agreed - 32 **Perceived Benefits** *I will get the flu shot if I were sure if it prevented the flu* • Strongly agreed - 40 *I would get the flu shot to prevent spreading the flu to other people* • Strongly agreed - 35 *I would rather have the flu shot than getting the flu* • Strongly agreed - 30 *People do not get the flu from the flu shots* • Strongly agreed - 20 *Flu shots almost always prevent the flu* • Strongly agreed - 20 *My doctor or the staff think I should get the flu shot* • Strongly agreed - 30 **Perceived Barriers** *It is difficult for me to find the time for a flu shot* • Strongly agreed - 20 **Perceived Harm** *The flu shot causes the flu* • Strongly agreed - 25 *I worry about the side effects from the flu shot* • Strongly agreed - 40 **Cues to Action** *I would get the flu shot if my doctor recommends it* • *Strongly agreed* - 30 *News of a bad flu season would influence me to get the flu shot* • Strongly agreed - 35 *I would get the flu shot if my family wanted me to* • *Strongly agreed - 30*