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Improving COVID-19 vaccination awareness and immunization in the African American ages 55 and up- A Quality Improvement Program

A Scholarly Project Presented to the Faculty of the Nicole Wertheim College of Nursing and Health Sciences

Florida International University

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#### **Abstract**

The unprecedented health care effects, and consequences of COVID-19 have been felt disproportionately within distinctive races and older adults, especially African Americans. An individual's race, comorbidities, age, and other determinants of health impact level of inclusion in society also influencing an individual's susceptibility to developing COVID-19. Over 42 million people in the United States have tested positive for the COVID-19. Reluctance in the COVID-19 vaccination within the Black community can delay the closure of the race mortality gap seen with COVID-19.

Increasing COVID-19 vaccination awareness in Blacks ages 55 and older population at a South Florid a medical center using a voice-recorded culturally sensitive program was the primary focus of the quality improvement program. The presentation illustrates the challenges associated with COVID-19, vaccine information, and local vaccine sites. Upon completion, participants completed a program questionnaire. The questionnaire administered using Qualtrics consisted of 10 questions used to evaluate COVID-19 vaccination acceptance rates, COVID-19 severity risk, along with effectiveness and benefits of the QI program.

A total of 33 subjects participated in the study, results were combined for analysis and significance of the wellness program. Results suggest 67 % (n=22) of participants were assigned a COVID-19 severity risk for strong, 30% (n=10) medium risk and 3% (n=1). Approximately, 97% (n=32) of participants found the program to be beneficial, while 3% (n=1) reported no benefit. Of the 33 participants included in the study 33% (n=11) of participants were unvaccinated and 67% (n=22) reported being vaccinated. Of the 11 participants that were unvaccinated, 91% (n=10) participants were willing to get vaccinated post intervention and 7% (n=1) of participants reported no interest in vaccination at all. Approximately 67% (n=22) of

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participants reported having little to no knowledge regarding the COVID-19 vaccine pre intervention, this decreased to 6% (n=11) post intervention. Findings suggest 33% (n=11) of participants reported having moderate to extreme knowledge regarding the vaccine pre intervention this increased to 94% post intervention, suggesting a 61% increase in patient awareness regarding COVID-19 vaccines. Conclusively, using a confidence interval of 95% and a set p-value of 0.05, we were able to calculate a z-score to determine the QI program implemented yielded statistically significant results.

In conclusion, the voice-based QI program is a cost-effective and efficient program for improve vaccination rates in African Americans. The information provided improved COVID-19 vaccination acceptance in African Americans ages 55 and up while promoting health literacy and primary preventative services. In the future, the framework of the program can be implemented for other wellness programs and catered to other languages.

**Keywords:** COVID-19 vaccine, COVID-19, vaccine acceptance, health disparities, racial disparities, coronavirus, vaccine hesitancy, African- American, elderly.

#### I. Introduction

Over the last year, the coronavirus has rapidly evolved into a global health tragedy and lead to economic destruction. The world-wide pandemic has shown to have rapid rate of transmission and a high rate of mortality. The corona virus pandemic has deemed itself more than just and healthcare crisis, disrupting several aspects of one's life from employment, family life, education, and economic stability. The coronavirus disease, according to the Center for Disease Control (2020), data indications reflect a disproportionate rate of incidence and mortality rates among ethnic minority communities (Malik et al., 2020). As vaccines are being deployed it is the responsibility of healthcare providers to disseminate culturally appropriate and accurate information to the community to increase vaccine awareness and acceptance in vulnerable populations. There is an importance for healthcare providers, public health officials and policymakers to prioritize vaccination acceptance in vulnerable populations such as African Americans. The purpose of this quality improvement project is to 1) assess COVID-19 vaccination rates in Florida 2) identify vulnerable minority populations, 3) implement a culturally sensitive and educational quality improvement (QI) intervention 4) administer an electronic questionnaire via Qualtrics to assess QI program and effects on vaccination acceptance rates 5) Evaluate QI program and calculate each individuals risk of severe complications if a patient were to contract COVID-19 in relation to participants number of chronic illnesses.

#### **Problem Statement**

Ethnic minority groups such as the African American population have not been exempted the disproportionate health disparities of COVID-19. Furthermore, the risk for severe illness surges with age and associated medical conditions. Lack of COVID -19 awareness and vaccination will only contribute to the disproportionate rise in morbidities and mortality.

Throughout history, African American have displayed an increased prevalence and mortality rate in relation to chronic diseases. Furthermore, underlying health care conditions increase the risk of severe illness from COVID-19. The pandemic has unmasked vulnerabilities regarding health disparities affecting people of color. Two main distributors have been approved for rapid deployment of vaccine administration, Moderna and Pfizer. Lack of knowledge between the two vaccines and the vaccine approval process has left many citizens questioning efficacy and acceptance. While the disease continues to rapidly spread and the US currently leading globally with over 42 million cases and over 672,000 deaths, health care professionals have a responsibility to culturally educate minority populations. Hesitancy in vaccine acceptance and administration impedes closing the race mortality gap seen in African Americans developing COVID-19. Successively, building confidence with knowledge can assist in vaccination administration.

# **II. Summary of Literature**

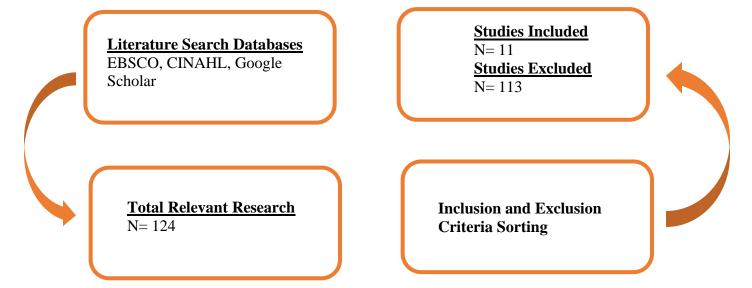
#### A. Literature Search

The following literature search was conducted to investigate the impact of COVID-19 awareness on vaccination acceptance in the elderly African American community. The literature search involved searching keywords related to the PICO question, "Can Implementing a cultural focused COVID-19 vaccine awareness education program increase COVID-19 awareness and immunization in African American communities ages 55 years or older?". Once the clinical question was generated, the investigation process was initiated, including sourcing relevant evidence-based studies from databases regarding the practice question. Several research engines were utilized to guide the research related to the COVID-19 vaccine acceptance and elderly minorities.

Research databases include EBSCO, CINAHL, and Google Scholar. Keywords used to facilitate the search included COVID-19 vaccine, COVID-19, vaccine acceptance, health disparities, racial disparities, coronavirus, vaccine hesitancy, African- American, elderly.

Due to the relevance of the topic all studies meet inclusion criteria, studies evaluated were within five years. All studies evaluated for the quality improvement project were conducted between 2020 and 2021. Inclusion criteria integrated literature reviews, systemic reviews, and meta-analysis studies. Articles were also sorted based on the exclusion criteria, articles related to non-human subjects, patients below 55 years old, and articles not written in the English language. The literature search produced 126 articles on all databases combine, studies were screened based on inclusion and exclusion criteria, 13 articles were identified to include in literature summary.

Figure 1.



#### C. Literature Review

1. Safety and Efficacy of COVID-19 Vaccines

When accepting a COVID-19 vaccine, individuals would prefer one that is safe and effective. Unfortunately, no one drug has been identified as definitive treatment for the corona virus. As a result, to come close to eradicating the pandemic, mass vaccination is critical. However, concerns have been raised regarding the quickness in creating, manufacturing, and distributing the vaccine. Throughout life many are taught quick fixes do not lead to long term solutions. As a result, a quick vaccine raises concerns regarding vaccine efficacy in Americans. The article "Safety and Immunogenicity of Two RNA-based Covid-19 Vaccine Candidates", aims to explain safety and immune response from phase 1 of trails of the BNT162b1(vaccine A) and BNT162b2 (vaccine B) vaccine. Both vaccines consist of a modRNA platform and process. However, differ in their nucleotide sequence that encode vaccine antigens (Walsh et al., 2020). The trial was double-blinded, placebo controlled, observer-blinded, and dose escalated. A total of 195 participants were placed in 13 different dosing groups consisting of 15 participants each. Within each group 12 would receive the same dose of their assigned vaccine and 3 participants would receive the placebo at random. Vaccine dose levels ranged between 10-30 micrograms and a group of 100 micrograms (Walsh et al., 2020). Results reported lower incidence rates and lower severe reaction rates with vaccine B in older adults. As a result, vaccine B at the 30 micrograms dose was elect for continuation to phase 2 and phase 3 trials to assess efficacy. Immunogenicity of both vaccines increased with age.

The race for manufacturing and successfully approving a COVID-19 vaccine has been on the forefront of many companies. Technology has been exploited to develop the first vaccines to address the rising mortality and prevalence rates of the coronavirus. Safety and efficacy are a priority for Americans when accepting vaccines. The article "Safety and Efficacy of the BNT162b2 mRNA Covid-19 Vaccine", researchers address the remaining trial phases for the

more effective vaccine, 30 micrograms of BNT162b2, 21 days apart. Vaccines were administered to patients 16 years old and older. BNT162b2 is a lipid nanoparticle formulated, nucleoside-modified RNA vaccine that encodes the Sars-CoV2 full length protein spike (Polack et al., 2020). A total of 43.548 participants were included in the study, participants were split into two groups. On group was administered the Pfizer funded vaccine while the other group was injected with placebo. Results suggest 8 cases of COVID-19 were identified in the experimental group and 162 participants were diagnosed with COVID-19 from the placebo group after the second dose was administered. As a result, researchers suggest BNT162b2 is 95% effective towards preventing COVID-19 (Polack et al., 2020). Adverse effects of both groups were minimal, safety of vaccine administration was determined by mild to moderate pain at the injection site.

The review "Prospects for a safe COVID-19 vaccine" address the rigorous and studies and phases required to develop an efficacious vaccine. To build vaccine confidence in Americans it is imperative that patients feel they are receiving a safe and effective vaccine. The Accelerating COVID-19 Therapeutic Interventions and Vaccine (ACTIV) Working Group aim to evaluate the immunity benefits from COVID-19 vaccines and corona virus infections. ACTIV address the lack of evidence surrounding vaccine associated enhanced diseases (VAED), researchers suggest, to achieve herd immunity the COVID-19 transmission rates must be controlled. In the last 10 years, vaccines have saved at the minimum 23 million lives (Haynes et al., 2020). The vaccine development process can be timely and rigorous, prior to administering a vaccine, several characteristics of the vaccine must undergo research and experimentation to asses' risks and benefits. Ultimately, researchers aim to review pertinent research and assess the likelihood of enhanced diseases from the COVID-19 vaccine (Haynes et al., 2020).

# 2. Determinants of Vaccine Acceptance

Globally, the COVID-19 virus has resulted in health and economical burdens to patients and families. Herd immunity by COVID-19 vaccine immunization has the potential to bring the virus to a pivotal end. According to Mayo Clinic (2020), herd immunity is attainable if at least 70% of the population is vaccinated. Herd immunity can decrease transmission rate and allows for protection to those not vaccinated. The study "The Factors Associated with US Adults' Likelihood of Accepting COVID-19 Vaccination" aimed to assess factors associated with research participant's likelihood of accepting and receiving the COVID-19 vaccine. Researchers hypothesize a widespread acceptance of the COVID-19 vaccine is fundamental to stem the virus. The study consisted of 1971 participants, 14% blacks, surveyors were assessed on their readiness to receive a proposed COVID-19 vaccine (Kreps et al., 2020). In addition, participants were provided full details two hypothetical vaccines and given the option for two different vaccines or neither.

A correlation was seen with increase in vaccine efficacy and vaccine acceptance. Marginal mean willingness increased with various factors of vaccination ability to prevent transmission. An efficacy of at least 70-90% for a COVID-19 vaccine was correlated with a higher probability of acceptance. Acceptance also increased with endorsements from the Center for Disease Control and Prevention and the World Health Organization. Ultimately, results suggest vaccine elements and political support influenced vaccine selection and acceptance.

The article "The COVID-19 Vaccine Race: Challenges and Opportunities in Vaccine Formulation", addresses the need for a safe and effective vaccine to control the continuous detrimental effects of the pandemic. Several factors play a role in the disproportionate morality rates of the disease. The COVID-19 virus has significantly impacted two populations in

particular, elderly and minority populations. The increase in mortality rates of vulnerable populations places an emphasis on an urgent need for development, manufacture, and distribution. Furthermore, researchers explain the current vaccines in clinical trials, along with their benefits and restrictions. The review also tackles the challenges associated with administration and dissemination. Researchers suggests different needle free modes of administration may assist with increasing vaccination rates in a short time (Wang et al., 2020).

Vaccine have been placed as the upmost priority in the health and policy sectors. To obtain herd immunity, vaccines must be accepted by majority of the population as previously stated. To prevent drastically rising death rates, vaccines must be widely accepted. The article "Determinants of COVID-19 vaccine acceptance in the US" aims to identify the current vaccine acceptance, vulnerable populations, and ways to disseminate information to target populations. The research consisted of 672 participants reflecting the US population, participants completed a questionnaire to assess likelihood of vaccination and if a correlation exists if influenza vaccinate uptake. About 67% of participants report they would receive a vaccine if made available. Older adults about 78% (age >55 years old) would receive the COVID vaccine once available. Throughout the study researchers were able to identify demographic and geographical disparities in vaccine acceptance rates (Malik et al., 2020). In conclusion, researchers suggest policymakers and public health officials need to prioritize vaccine acceptance in vulnerable populations.

# 3. Aging and Racial Disparities Correlated with COVID-19

A study conducted by John Hopkins University aimed at addressing the prevalence of COVID-19 vaccine reluctance and influences affecting vaccine intentions. The study was able to utilize the National Opinion Research Center (NORC) US national survey data to examine the relationship between vaccine intention and prevention behaviors (Latkin et al., 2021).

Furthermore, researchers were able to correlate racial differences in participants and vaccine intention. A total of 1,056 participants were invited to complete the survey, a total of 1,043 participants completed the survey in either English or Spanish. The dependable variable was measured by assessing participant willingness to accept a COVID-19 vaccine once available. The survey addressed vaccine intention, COVID-19 social behaviors, covariates, and reasons for lack of vaccination. Results suggest approximately 17% of participants report no intention of receiving the vaccine and about 30% of participants were unsure of receiving the vaccine. According to the study, Black and Latino participants reported less likely to receive the vaccine.

Researchers conducted a sub-analysis using Fisher's exact Tests to assess reasons for lack of vaccination, results suggest a significant difference racial/ethnic difference in participants reporting no intention or uncertainty with receiving the COVID-19 vaccine. One major concern contributing to the lack of vaccination included concerns for viral transmission from the vaccination. About 66% of Blacks and 47% of Hispanic participants (Latkin et al., 2021). Ultimately, researchers suggest public health awareness programs are vital for increasing vaccine uptake and in greater detail for concerns in the Black and Latino community.

The study conducted by Texas Agricultural and Mechanical University reveals correlations of COVID-19 vaccination hesitancy and common reasons for vaccine refusal. Over the last year the United States continues to battle the coronavirus pandemic that has rapidly progressed resulting in a global health crisis. According to the Center for Disease Control (2020), Black and Hispanics diagnosed with COVID-19 are more than four times more likely to be hospitalized during the course of the virus when compared to Whites. The COVID-19 pandemic was accompanied with massive conflict regarding health, travel, trade, and global economy. The study involved surveying over 5,000 Americans nationally, regarding their behaviors and

thoughts towards COVID-19. The study indicated approximately 40% response rate and 65% completion rate (Callaghan et al., 2020). Overall, 31% of surveyors have no intention of receiving the COVID-19 vaccination. A lack of vaccination acceptance can hinder the goal of herd immunity to hinder the spread of the COVId-19 virus. Ultimately, researchers reveal the issues surrounding vaccine hesitancy in effort to improve health communication to increase COVID-19 vaccination rates.

The study "Understanding Drivers of COVID-19 Vaccine Hesitancy Among Blacks" aims to address the reasons for low vaccination acceptance rates in the Black community. Blacks have been disproportionately affected by the coronavirus compared to other races (Momplaisir et al., 2020). As history has shown, the Black community has a higher prevalence and mortality rate for chronic diseases. Reluctance in the COVID-19 vaccination in the Black community can impede the closure of the race mortality gap seen with COVID-19. Researchers aimed to canvas COVID-19 hot spots in the Black community to organize focus groups addressing attitudes of the black community (Momplaisir et al., 2020). Guided by the ground theory, a total of 24 participants were included in the study and separated into 4 focus groups, 89% were black. Researchers were able to identify a high rate of vaccine hesitancy in the community. Ultimately, researchers suggest healthcare provider intervention with vaccine recommendations and transparency is the best way to address hesitancy in the Black community.

The review "Disproportionate impact of the COVID-19 pandemic on immigrant communities in the United States" attempts to address the potential impact of the corona virus on immigrants. The study based out in Texas, suggests hot spot states are experiencing high mortality rates in minority groups. Researchers propose high mortality rates in minority groups is directly correlated with increase in comorbidities, socioeconomic status, and lack of healthcare

access. Texas has 1.6 million immigrants in Houston, patients report reduced internet, phone access and limited ability to speak English are factors that can increase likelihood of contracting COVID-19. Researchers propose policy recommendations, increased healthcare access and culturally catered care can assist with addressing disproportionate impacts of COVID-19 on minority groups (Clark et al., 2020).

Lastly, the study "COVID-19 Vaccination Hesitancy in the United States: A Rapid National Assessment", bring forth the concerns of Americans in relation to immunization on a national level. Researchers developed a questionnaire administered to 1,878 participants, consisting of 26% Non-white or Hispanic participants and 19% of participants were Hispanic. The likelihood of accepting a vaccine was very likely at about 52% and the remaining 48% expected hesitancy or rejection of the vaccine. Results suggest vaccine hesitancy was increased in African American participants (34%) and Hispanics (29%). Given the rapid spread of disease, a priority needs to be placed on mass vaccination and distribution of information. Researchers propose special attention is warranted to minority groups and an emphasis needs to be placed on evidence-based communication, media distribution and policy measures (Khubchandani et al., 2020).

# III. PICO Question and Objectives

Can Implementing a culturally focused COVID-19 vaccine awareness education program increase COVID-19 awareness and immunization in African Americans ages 55 years or older?

# A. Primary DNP Project Goal and Objectives

The impact of the COVID-19 pandemic and associated health consequences has been felt differently across different ethnic and age groups. In March 2020, once the COVID-19 evolved into the United States (US), social status was quickly divided by essential and non-essential

employment. While a portion of the nation was transitioning to working and schooling from home, the other portion was forced to expose themselves to the COVID-19 virus to maintain the functionality of society. Ultimately, the impact of COVID-19 on health was significantly influenced by social determinants and health disparities.

As previously stated, unambiguously, COVID-19 has disproportionately impacted mortality rates in African Americans in comparison to the White population. Throughout history, the African American community has been at greater risk of developing diabetes, high blood pressure and cardiovascular disease, all high-risk factors for COVID-19 (Greenway et al., 2020). According to Greenway and colleagues (2020), as of June 2020, African Americans and Latino's comprise 21.8% and 33.8% of the US COVID-19 cases, and individually account for 13% and 18% of the American population. The extent of one's health is significantly influenced by several social determinants.

Lack of knowledge is a social determinant of health that can impact the health and well-being of an individual. The extent of one's health is significantly influenced by several factors, one being their quality of education. As a result, educational inequality can be considered as an underlying cause for many health disparities in the Black community. A lower level of education or English proficiency can place the Black community at a health disadvantage and increase their incidence of illness such as COVID-19. Furthermore, A lack of patient knowledge and understanding can often lead to mistrust in the health care system. Many African Americans have a lingering mistrust in the healthcare system after the notorious Tuskegee study that deluded African Americans into thinking they were receiving free healthcare when the study was essentially designed to trace the course of untreated syphilis. Lack of knowledge and other health

disparities in addition to a rapid vaccine distribution can further the level of mistrust in immunization.

Second, lack of credible information reaching heavily impacted communities increases the risk of disease and transmission. Educational interventions customized to linguistic, cultural, and social circumstances of the African American population is crucial to preventing transmission of preventable illness and increasing awareness and acceptance of primary prevention vaccines. In addition, health care providers play a major role in bridging the gap in healthcare knowledge and healthcare outcomes. Several factors influence the reluctance in African Americans when deciding to be immunized, hesitation on safety and efficacy, uncertainty with rapid deployment of vaccines and, mistrust regarding the motivation and mandates of the vaccine. Hence, healthcare providers play a vital role in empowering patients to take control of their own health and eliminating healthcare inconsistencies. Healthcare providers need to address doubtfulness with accurate and culturally appropriate information to build confidence in patients. Standardized treatment and COVID-19 management protocols should be in place for all patients despite English proficiency. The COVID-19 vaccination awareness quality improvement program places health equity as the main principle.

Vaccines are the most efficient interventions for addressing and terminating the COVID-19 pandemic. The COVID-19 vaccination can reduce mortality and morbidity rates in relation to viruses and diseases. According to Mayo Clinic (2020), herd immunity is attainable if at least 70% of the population is vaccinated. The vaccine can offer improved healthcare outcomes in two ways, direct and indirect protection. Directly, by preventing disease in the those vaccinated and indirectly in those unvaccinated by reducing transmission in vaccinated individuals.

The primary goal of the COVID-19 Awareness Program was to successfully implement a quality improvement program at Medical Center in South Florida to increase COVID-19 vaccination awareness in the Black ages 55 years or older population. The program aimed to decrease hospitalizations and deaths related to COVID-19 in African Americans while disproportionately increasing vaccination awareness and rates. The South Florida medical center has been providing primary care to a large population of Black patients in Fort Lauderdale since 1996, with 95% of patients being of African American ethnicity. The practice currently provides primary care to over 2,000 patients, averaging about 10 – 30 patients a day depending on availability of additional providers. Ultimately, the awareness program aimed to provide culturally sensitive and accurate health information regarding the COVID 19 virus and vaccines in effort to improve vaccination awareness and immunization in the target population. With successful implementation the COVID-19 Vaccination Awareness Program, in the future health care providers can partner with patients and communities to decrease negative healthcare effects caused by COVID-19 disparities while advocating for structural change (Tai et al., 2020).

# **B.** Quality Improvement Objectives

- Identify a primary care office with a large ethnic patient population in an underserved populated area. Ethnic groups to include African American patients ages 55 years or older for a duration of 14 days
- 2. Create COVID-19 awareness program for African American minorities within 2 months
- 3. Analyze current target patient census with office manager to identify potential patient outreach within 2 months
- 4. Establish a protocol for implementing the COVID-19 Awareness Program and begin educational interventions within 8 months

5. Evaluate COVID-19 vaccination awareness acceptance and vaccine immunization among elderly African American minorities after 2-week program implementation.

#### IV. Definition of Terms

**Corona Virus Disease (COVID-19):** an infectious disease caused by the corona virus resulting in severe respiratory illness in most people infected (WHO, 2020).

**Black or African American:** a person having origins in any of the black racial groups of Africa (CDC, 2015)

Race: grouping of people based on shared physical characteristics (CDC, 2015).

**Ethnicity:** ethnic quality or affiliation with a group based on shared attributes (Merriam-Webster, 2021).

**Elderly:** being past middle age, relating to a point later in life (Merriam-Webster, 2021).

**Vaccines:** a manufactured product that offers protection by stimulating one's immune system to develop immunity when a specific disease is introduced to the body (CDC, 2018).

**Immunity:** protection from an infectious disease (CDC, 2018).

**Herd Immunity:** When a sufficient portion of a population is vaccinated or immune to an infectious disease in effort to diminish rate of transmission (CDC, 2020).

**Pfizer Vaccine:** an intramuscular FDA emergency use approved mRNA vaccine to prevent COVID-19 in patients 16 years of age or older

**Moderna Vaccine:** an intramuscular FDA emergency use approved mRNA vaccine to prevent COVID-19 in patients 18 years of age or older

**Patient Satisfaction:** an indicator for measuring the level of happiness with one's healthcare **Health Literacy:** the ability of an individual to use, find and understand health information to make informed health decisions for themselves or others (CDC, 2021).

**Social Determinants of Health:** conditions in environments of daily living that influence health, healthcare outcomes and risks (CDC, 2021).

**Native Language:** language spoken in one's country of origin or one's primary language (Merriam-Webster, 2021).

**Culturally Sensitive:** being culturally aware, have knowledge and accepting of other cultures and identities (Merriam-Webster, 2021).

**Health Disparities:** preventable variances in burden of disease, injury, violence, or opportunities to achieve optimal health inhibited by social disadvantages (CDC, 2017).

**Visual-based education:** learning style where the learner needs to see the information for processing

**Pamphlet:** A printed booklet of information (Merriam-Webster, 2021).

**Questionnaire or Survey:** a set of questions for obtaining statistical or personal information (Merriam-Webster, 2021).

#### V. Conceptual Underpinning and Theoretical Framework

The theory of planned behavior is a framework aimed at explaining and predicting behaviors (Steinmetz et al., 2016). The theory suggests the driving force behind behaviors is the intent to implement the behavior. Consequently, intent is influenced by motivational variables (Steinmetz et al., 2016). Utilizing the theory of planned behavior can assist with designing health behavioral changes, vaccine acceptance and literacy. The purpose of the study was to improve COVID-19 vaccination acceptance and immunization in African Americans ages 55 and up while promoting health literacy and primary preventative services.

#### VI. Methodology

#### A. PDSA Quality Improvement Method

As previously stated, The COVID-19 pandemic is a growing healthcare burden associated with several comorbidities and becoming one of the leading causes of hospitalizations across the nation. Furthermore, African Americans and elderly patients are at increased risk of developing healthcare complications because of the COVID-19 virus. When a patient is elderly, African American and diagnosed with a chronic illness, their chance of mortality increases significantly if they contract the COVID-19 virus and the impact on quality of life can be profound. s

The COVID-19 Awareness Program aimed to educate patients on the COVID-19 virus, significance of COVID-19 immunizations, preventative measures for improving positive health behaviors, and vaccine acceptance. Ultimately, increased costs in healthcare are influenced by unhealthy behaviors which lead to increased health risks, health deterioration and promote an unhealthy lifestyle leading to increased mortality and morbidities. Subsequently, effective communication, willingness to prevent COVID-19, culturally competent education and a reliable support system can significantly impact the effectiveness of the program.

The plan, do, study and act (PDSA) model is a four-step continuous clinical model focusing on quality improvement in the healthcare setting. The systemic processes can be echoed several times in different ways until a prime solution is achieved. Each component of the clinical model is critical to the success of the implementing the quality improvement intervention. Using the continuous cycle, we can identify the clinical problem, decreased vaccination rates in African American elderly patients. Next, an approach was formulated to resolve the issue of decreased vaccination rates, by generating goals and objectives for the foundation of the QI program. Once implemented, the program facilitated the next portion of the cycle allowing for collecting and analyzing for comparison against goals and objectives. Lastly, with successful implementation of

the program, strategies can be permanently implemented to maintain improved outcomes addressing the clinical problem.

During the Act phase failures and success of the program were measured, evaluated, and corrected to ensure expected solutions and minimize challenges and barriers towards the clinical solution. The COVID-19 Awareness Vaccination Program prioritized improving quality of life in African American patients ages 55 years or older in conjunction with increasing herd immunity to optimistically bring the COVID-19 pandemic to a pivotal end. Secondly, the program aimed to reduce health disparities and inconsistencies related to lack of knowledge, improve primary prevention compliance, improve patient retention, and improve patient moral.

To be successful, a quality improvement program must be well organized, a collaborative effort and use analytics to track positive changes and yield optimal results. The COVID-19 Awareness Program aimed to prioritize immunization and improved healthcare relationships to avoid the negative effects of the COVID-19 virus. The quality improvement team consisted of the DNP program leader, front desk secretary, DNP prepared faculty and a medical physician. Ultimately, frontline healthcare providers have the most interaction with patients and can significantly influence health behavioral changes.

# **B.** Planning Phase

#### 1. Study Design

The quality improvement program followed a team guided approach for roles and responsibilities. Data collection included age, ethnicity, patient knowledge of COVID-19 vaccines pre and post intervention, and patient satisfaction with the COVID-19 awareness program. A recruitment ad was displayed at the front desk to promote program participation.

Recruitment was conducted by front desk secretary, identifying African American patients ages

55 and up. An informational letter was provided in either English or Creole regarding voluntary participation at the beginning of the presentation. Recruitment consisted of identifying participants eligible for the quality improvement program. Once processed by the medical assistants for labs and vitals patients were placed in their individual exam rooms. Once in the exam room front desk personnel provided the educational intervention, a voice-recorded PowerPoint presentation catered to the patient's preferred language of either English or Haitian Creole.

Upon completion of the voice recorded presentation, the last slide provided participants with direct link or QR code for personnel device use to an online questionnaire. The online questionnaire was administered via Qualtrics for evaluation of COVID-19 vaccination acceptance rates, along with effectiveness and benefits of the quality improvement program. Following, patients were seen by primary the care provide for their routine office visit and to address any additional concerns regarding COVID-19. All clinical issues or questions were directed to participants treating physician. Upon check out, patients were provided with a pamphlet regarding COVID-19 facts, COVID-19 vaccination information and local vaccination sites in either English of Haitian Creole.

The DNP project leader was advised by Doctoral faculty and a board-certified internal medicine medical doctor. The project leader met quarterly with clinical preceptor to analyze and discuss data collected throughout the duration of the quality improvement program. The COVID-19 vaccination awareness program was administered in the most common primary languages in the South Florida's African American population, English and Haitian Creole. The native language catered program aimed to promote health literacy, address health inequalities, improve patient satisfaction with healthcare provider, and COVID-19 precaution compliance. The Creole

and English voice recorded presentations were uploaded onto two iPad tablets. Upon discharge patients were provided a primary language catered pamphlet with basic information regarding the COVID-19 vaccine and local immunization sites.

The total cost for implementing the COVID-19 vaccination awareness program was estimated at \$397.11. Translational services for informational letter, survey and printed informative pamphlets regarding COVID-19 vaccines, sites locations, vaccination requirements, and common questions in English, and Creole were \$214.46. Sanitation supplies to sanitize tablets after each use cost \$18.65. Qualtrics was utilized for patient questionnaires in Haitian Creole and English and for result analysis. Medical provider participated in the study conducting routine patient visits to address any additional COVID-19 concerns expressed by patients or regarding individual COVID-19 vaccination restrictions for patients. As a result, additional costs for office personnel are not incurred, and program was implemented during office hours.

# 2. Sampling

All participants were 55 years of age or older and of African American descent.

Participants younger than the age of 55 years and of other ethnicities were excluded from the quality improvement program.

# 3. Setting

The prospective quality improvement program was implemented for patients in a single primary care setting at South Florida Medical Center for a period of 14 days. The practice currently provides primary care to over 2,000 patients, averaging about 10 - 30 patients a day depending on availability of additional providers. Approximately, 95% of patients seen at the South Florida medical are of African American ethnicity.

#### 4. SWOT Analysis

A SWOT analysis tool is beneficial for evaluating the strengths and weaknesses in a quality improvement program. The tool aims to explore the strengths, weaknesses, opportunities, and threats of an intervention (Moran, Burson & Conrad et al., 2016). The analysis was implemented to assess the COVID-19 Awareness Program. Intrinsic factors are identified as strengths and weakness that can impact the program negatively or positively (Table 1). Next, extrinsic factors that could help or hurt the program were also identified (Table 1).

Table 1: SWOT analysis

Internal Factors							
Strengths	Weaknesses						
<ul> <li>Doctoral prepared preceptor</li> <li>Staff involvement, stake holders enlisted in early program phases</li> <li>Large target patient population</li> <li>Staff and program coordinator fluent in English and Creole</li> <li>Preceptor fluent in English and Creole</li> <li>Dedicated and experienced leadership</li> <li>Culturally catered visual presentation and pamphlets</li> <li>Sufficient exam rooms for implementation</li> <li>Program Coordinator Autonomy</li> <li>Organized Workflow</li> </ul>	<ul> <li>Quality improvement program to be approved prior to implementation</li> <li>Delayed IRB Approval</li> <li>Inability to control vaccination acceptance rates</li> <li>COVID-19 Pandemic</li> <li>Retention of office staff to promote continuity of program</li> <li>Participants need to have a basic reading level</li> <li>Shortened time frame</li> <li>Novice Researcher</li> </ul>						
Externa	l Factors						
Opportunities	Threats						
<ul> <li>Participants on site</li> <li>Project Coordinator</li> <li>Supportive management, staff, preceptor, and graduate faculty</li> <li>Benefit for providers to increase patient healthcare knowledge, literacy, and satisfaction</li> <li>Increase office customer service ratings</li> <li>Increase vaccine awareness to decrease transmission of disease</li> </ul>	<ul> <li>Ensuring up to date COVID-19 vaccine information is transmitted to patients</li> <li>Managing time to avoid overlapping with exam time</li> <li>Availability of electronic devices</li> <li>Ensuring patients are 55 years or older</li> <li>MD coverage for medical questions unknown to coordinator</li> <li>Project Sustainability</li> <li>Delayed IRB</li> <li>Available personnel for effective implementation</li> <li>Electronic device malfunctioning</li> </ul>						

#### 5. Measurement Tools

Basic non-identifying demographic information were collected from participants, age, and ethnicity. Participants were asked the following series of questions: 1) if they have received the COVID-19 vaccine, 2) assess vaccination rates for participating subjects 3) assess participant COVID-19 knowledge before and after quality improvement program, 4) assess participant satisfaction with the program. Next, the questionnaire will address 5) participants willingness to be immunized with the COVID-19 vaccine, representing participant vaccination acceptance. Lastly, questionnaire responses were used to calculate risk of severe complications if a patient were to contract COVID-19 in relation to each participant's number of chronic illnesses.

As previously stated, participant's individual questionnaire responses were to assess the risk of a patient developing severe complications if they contracted the corona virus and hospitalization. The risk calculator scale ranged from 2 to 15. The accumulated points from five of the questionnaire questions (questions 1, 3, 7 and 9) were computed to assess each individual participant's risk of hospitalization or risk of symptom severity. The higher the number on the scale the greater the risk of severe complications if participant were to develop COVID-19. Majority of the questions were provided using a 5- point Likert scale ranging from strongly disagree to strongly agree answer format (Malik et al. 2020). Survey responses allowed for the calculation of descriptive statistics such as vaccine acceptance and willingness and patient program satisfaction.

Conclusively, using a confidence interval of 95% and a set p-value of 0.05, we were able

to calculate a z-score to determine if the QI program implemented yielded statistically significant results.

# 6. Protection of Human Subjects

An informational letter was provided prior to implementing the COVID-19 vaccination awareness program to each participant. Informational letters were provided in English or Haitian Creole to cater to each participant's primary language. Once informational letters were provided and participants expressed interest, participants were provided the voice-based PowerPoint presentation. At the end of the presentation all participants had the option to click on the link provided or scan the QR code provided to complete the 10-question questionnaire. Prior to check out participants were given an educational pamphlet with COVID-19 vaccine information and locations in either English or Haitian Creole.

Patients can benefit from increased health literacy, improved patient care satisfaction, and from promotion of primary interventions such as vaccines. Implementation of the COVID-19 vaccination awareness program does not pose any health risks to the participants. The data collection process protects patient privacy by remaining in a password protected electronic device and by omitting questions requiring primary patient identifiers such as name and address. Once data entry is completed the data is secured in a password protected computer, accessible by the DNP project leader. As previously stated, no personal patient information will be disclosed, including participants refusing to participant in the quality improvement program. The study was approved by the Internal Review Board (IRB) at Florida International University prior to implementation.

#### 7. Data Collection

Data collection was implemented and obtained during the questionnaire portion of the quality improvement program. The surveys were anonymous and did not require participant identifying information such as name and address. Upon completion of the COVID-19 vaccination awareness presentation via Ipad, participants were directed to a Qualtrics link to be used either on the Ipad provided or on their personal device by scanning a QR code provided. The educational intervention was administered prior to health screening with physician to allow patients to discuss any COVID-19 related questions with the primary care physician. In addition, patients were provided an informative pamphlet catered to their primary language upon check out. Coordinator was responsible for sorting and organizing the data collected, conduct data entry and analysis from a remote location.

The survey, administered by Qualtrics, consisted of 10 questions formulated to assess participant demographics, patient knowledge of the COVID-19 vaccine, patient satisfaction with the COVID-19 Vaccination Awareness Program, vaccine confidence, and vaccine acceptance (Table 2). Surveys and informational letters were provided in English and Haitian Creole. Patient satisfaction was assessed using a rating scale from 1 to 5, with 1 being no benefit to the program and 5 signifying extreme benefit of completing the program.

#### 8. Data Analysis

Patient demographics were collected at the beginning of the questionnaire including age and ethnicity. Analysis of the collected data was conducted by DNP project leader.

All survey results were stored securely in a password protected computer and a password

protected Qualtrics account. All project members were trained prior to implementation of the quality improvement program. All survey results were stored in a secured computer to protect patient privacy. Data entry was stored and conducted on one computer and filed daily during the 14-day implementation. The computer was password protected and accessible only to DNP project coordinator. The anonymity of the surveys on Qualtrics

Table 2: COVID-19 vaccination awareness program questionnaire

Age:							
Ethnicity:							
Have you received any of the approved COVID-19 vaccines?	1- Yes	2- No					
How would you rate your knowledge of the COVID-19 vaccine PRIOR to the presentation ?	1- No knowledge	2- Little knowledge	3- Some knowledge	4- Modrate knowledge	5- Extreme knowledge		
How confident were you in the COVID-19 vaccine PIOR to the presentation?	1- No confidence	2- Barely confident	3- Neutral	4- Moderately Confident	5- Extremely confident		
How did you learn about the COVID-19 vaccines?	1- Television	2- Newspaper/ Magazine	3- Website	4- Family and Friends	5- Healthcare provider	6- Health officials	7- Social media
If made available and recommended for you, how likely are you willing to take the COVID-19 vaccine?	1- Not likely	2- Somewhat not likely	3- Neutral	4- Moderate likely	5- Extrmely likely		
How would you rate the COVID-19 Vaccination Awareness Program?	1- No benefit	2- Little benefit	3- Neutral	4- Moderate benefit	5- Extreme benefit		
How many chronic illnesses have you been diagnosed with?	1- (1-3) chronic illnesses	2- (4-7) chronic illnesses	3- (8 or more) chronic illnesses				
How would you rate your knowledge of the COVID-19 vaccine AFTER the presentation ?	1- No knowledge	2- Little knowledge	3- Some knowledge	4- Modrate knowledge	5- Extreme knowledge		

protected patient information and did not include participant identifiers such as name and address. No personnel information was collected from participants or shared during the program, including participants refusing to participant in the quality improvement program. Informational letter provided at the beginning of the presentation provided an overview of data collection and distribution to offer patient assurance regarding patient privacy. Ultimately, the survey was designed to assess and improve COVID-19 vaccination awareness, improve COVID-19 health literacy by providing culturally sensitive and accurate health information to participants, identify vulnerable minority

populations and assess benefits if implementing a quality improvement program in the primary care setting.

#### VII. Results

# 1. Findings

Combined the English and Creole speaking cohorts sample size produced: n=33.

Completion of the survey in its entirety could not be controlled and as a result three questionnaires were excluded, reducing participation retention by 8%, participates recruited (n=36), number of questionnaires retrieved (n=33). Majority of the participants were primarily English speaking with about 21% of participants only Creole speaking. Using excel to translate the data, approximately 58% (n=19) of participants primary source of knowledge was from television, increasing risk of misinformation and inaccurate statistics. About 7% (n=7) of participants were initially informed of the COVID-19 vaccine from a health care provider.

Using the created COVID-19 severe complication risk calculator, 67% (n=22) of participants were assigned a COVID-19 severity risk for strong, 30% (n=10) medium risk and 3% (n=1). Approximately, 97% (n=32) of participants found the program to be beneficial, while 3% (n=1) reported no benefit. Of the 33 participants included in the study 33% (n=11) of participants were unvaccinated and 67% (n=22) reported being vaccinated. Of the 11 participants that were unvaccinated, 91% (n=10) participants were willing to get vaccinated post intervention and 7% (n=1) of participants reported no interest in vaccination at all (Figure 1). Within the 33% of unvaccinated participants, 30% (n=3) of the willing to be vaccinated group were primarily Creole speaking and 70% (n=7) primarily English speaking.

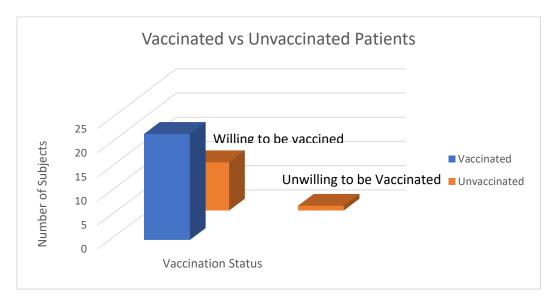


Figure 1: Vaccinated vs unvaccinated participants and willingness to get vaccinated

Approximately 67% (n=22) of participants reported having little to no knowledge regarding the COVID-19 vaccine pre intervention, this decreased to 6% (n=11) post intervention. Findings suggest 33% (n=11) of participants reported having moderate to extreme knowledge regarding the vaccine pre intervention this increased to 94% post intervention, suggesting a 61% increase in patient awareness regarding COVID-19 vaccines (Figure 2).

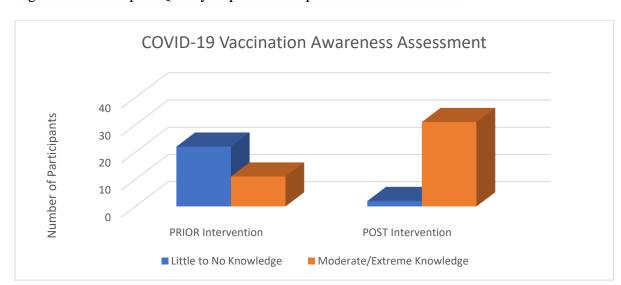


Figure 2: Pre and post Quality improvement questionnaire assessment

Conclusively, using a confidence interval of 95% and a set p-value of 0.05, we were able to calculate a z-score to determine if the QI program implemented yielded statistically significant results.

#### VIII. Discussion

#### 1. Limitations

Implementation of the SWOT analysis prior to initiating the study allowed for identifying potential future challenges. As a result, we were able to address challenges with preconceived solutions. Initiation of the study was delayed by IRB approval and the resubmission process. Initially the study was projected to last two months in Jan 2021 at the peak of COVID-19 in South Florida. However, the study was delayed until October 2021 and shortened to two weeks. Consequently, projected sample size was shortened, still within the approved sample size by the IRB.

The COVID-19 pandemic infection control guideline requirements significantly restricted and limited patient interaction. Next, there was a delay in voice-based video production and a delay in translation services. As a result, a voice-based PowerPoint presentation was created to respect the approved IRB study deadline. Recruitment process could only be implemented as time allowed without delaying the remaining practice workflow. Limitation also included an inexperienced novice researcher; the navigation of the research process may have been impacted.

In 2021, President Biden fortunately enforced vaccination mandates for private businesses, social institutions, large employers, and healthcare workers which increased vaccination rates. The two policies implemented by the Biden administration aimed to increase vaccination, require employers with 100 or more employees to require staff to be

fully vaccinated or tested weekly through the Occupational Safety and Health Administration (OSHA). Furthermore, requiring health care workers employed by Center for Medicare and Medicaid Services facilities to be vaccinated.

# 2. Implications for Advanced Practice Nursing

While there are many ways to disseminate the quality improvement program results, the most successful dissemination strategy would be a poster presentation. DNP project team hopes to submit the following QI program to be accepted by an accredited academic nursing journal. The integration of the voice-based COVID-19 presentation in patient waiting rooms to promote vaccination awareness may be implemented in the future at the South Florida medical center. In the future, the COVID-19 vaccination awareness program can be implemented with other languages. Furthermore, the framework can be utilized for other patient wellness programs.

#### IX. Conclusions

Despite limitations and challenges met during the study we were able to prepare for alternative solutions for implementing the program. Lack of awareness and vaccination will only contribute to the disproportionate rise that we continue to see in African American older adults. Lack of addressing the issue while the virus continues to spread can be very detrimental to minority races. Formulating an effective quality improvement program targeted at increasing vaccination awareness and immunization through influencing knowledge and building confidence. As vaccines and boosters continue to be deployed it is the responsibility of healthcare providers to disseminate culturally appropriate and accurate information to patients. Open communication, willingness to prevent COVID-19, and a reliable support system can significantly impact

the effectiveness of the program. Further, supporting the need for a multisectoral approach. While the study did produce significant results, 61% increase in patient awareness, there is still a lot to be done to achieve the recommended 70% herd immunity for combating the COVID-19 pandemic.

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# Appendix A.

COVID-19 Vaccination Awaren	ess Program Timeline	
Project Task	Time Frame	
Develop framework for COVID 19 awareness program	January 20, 2021	
Submission of goal statement and action plan	January 24, 2021	
Identification of clinical problem and purpose, development of PICO question	February 1, 2021	
Literature search, relevancy, and review	February 22,2021	
Program planning, feasibility, and SWOT analysis	March 15, 2021	
Project proposal with educational interventions, visual based presentation, and questionnaires	July 10, 2021	
DNP project approval	October 6, 2021	
Implementation of COVID-19 Vaccination Awareness Program, Data Collection	October 11, 2021	
Data management, data analysis and finalization of DNP project	November 29, 2021	

Appendix B.



#### INFORMATIONAL LETTER

Improving COVID-19 vaccination awareness and immunization in the African American ages 55 and up at a South Florida Medical Center. A Quality Improvement Program

Hello, my name is Lissa Bazile APRN, MSN, DNP student. You have been chosen at random to be in a research study about improving COVID-19 vaccine awareness in African American patients ages 55 and older. The purpose of this study is to determine whether a COVID-19 vaccination awareness program can increase COVID-19 vaccination rates in African Americans ages 55 and older. If you decide to be in this study, you will be one of 60 - 100 people in this research study. Participation in this study will take 20 minutes of your time. If you agree to be in the study, I will ask you to do the following things:

- 1. Patients will watch a voice-recorded presentation in English or Creole using an Ipad provided regarding the COVID-19 virus, benefits of COVID-19 vaccine and positives behaviors for preventing COVID-19. At the end of the presentation, patients will complete a 10-question survey to evaluate effectiveness of COVID-19 awareness program.
- 2. The survey questions will be administered via Qualtrics in English or Creole, patient choice. It is a survey software used to create, gather, and assess survey data. At the end of presentation patients will be directed to survey questions on the Ipad. Participants will be instructed to complete the survey and submit questions to researcher.
- 3. Upon discharge, participants will be provided a pamphlet including important information from the COVID-19 presentation and a list of local vaccination sites.

There are no foreseeable risks or benefits to you for participating in this study. It is expected that this study will benefit society by increasing COVID-19 vaccine knowledge and health self-sufficiency in African American patients ages 55 and up. It is also expected to increase vaccination rates in African American patients 55 years of age or older.

There is no cost or payment to you. If you have questions while taking part, please stop me and ask. Your answers will remain confidential and anonymous.

If you have questions for one of the researchers conducting this study, you may contact my graduate instructor Dr. Dana Sherman DNP, APRN, ANP-BC, FNP-BC at (305) 348-2247 or Lissa Bazile APRN, MSN, DNP student as (954) 512-4679.

If you would like to talk with someone about your rights of being a subject in this research study or about ethical issues with this research study, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at ori@fiu.edu.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop. You may keep a copy of this form for your records. All clinical questions and issues should be directed to your treating physician.

Appendix C.



# Amelyore konsyantizasyon vaksinasyon COVID-19 ak vaksinasyon nan Afriken Ameriken ki gen laj 55 ak plis nan yon Sid Florid Medical Center. Yon Pwogram Amelyorasyon Kalite

Bonjou, non mwen se Lissa Bazile APRN, MSN, DNP elèv. Ou te chwazi o aza yo dwe nan yon etid rechèch sou amelyore konsyans vaksen COVID-19 nan pasyan Afriken Ameriken ki gen laj 55 ak pi gran. Rezon ki fè etid sa a se detèmine si yon pwogram konsyantizasyon vaksen COVID-19 ka ogmante pousantaj vaksinasyon COVID-19 nan Afriken Ameriken ki gen laj 55 ak pi gran. Si ou deside yo dwe nan etid sa a, ou pral youn nan 60 - 100 moun ki nan etid rechèch sa a. Patisipasyon nan etid sa a pral pran 20 minit nan tan ou. Si ou dakò yo dwe nan etid la, mwen pral mande w fè bagay sa yo:

- 1. Pasyan yo ap gade yon prezantasyon anrejistre vwa nan lang angle oswa kreyòl lè l sèvi avèk yon Ipad bay konsènan viris la COVID-19, benefis nan vaksen COVID-19 ak konpòtman pozitif pou anpeche COVID-19. Nan fen prezantasyon an, pasyan yo pral ranpli yon sondaj 10-kesyon yo evalye efikasite nan pwogram konsyantizasyon COVID-19.
- 2. Kesyon yo sondaj yo pral administre atravè Sondaj makak nan lang angle oswa kreyòl, pasyan chwa. Li se yon lojisyèl sondaj itilize yo kreye, ranmase ak bourik done sondaj. Nan fen prezantasyon pasyan yo pral dirije yo sou kesyon sondaj sou Ipad la. Patisipan yo pral enstwi ranpli sondaj la epi soumèt kesyon bay chèchè.
- 3. Lè yo egzeyate, patisipan yo pral bay yon ti liv ki gen ladan enfòmasyon enpòtan nan prezantasyon COVID-19 la ak yon lis sit vaksinasyon lokal yo.

Pa gen okenn risk previzib oswa benefis pou ou pou patisipe nan etid sa a. Li espere ke etid sa a pral benefisye sosyete a lè yo ogmante konesans vaksen COVID-19 ak sante endepandan sante nan pasyan Afriken Ameriken ki gen laj 55 ak yo. Li espere tou ogmante pousantaj vaksinasyon nan pasyan Afriken Ameriken ki gen 55 an oswa plis.

Pa gen okenn pri oswa peman pou ou. Si ou gen kesyon pandan w ap pran pati, tanpri sispann m 'epi mande. Repons ou yo ap rete konfidansyèl e anonim.

Si ou gen kesyon pou youn nan chèchè yo ki fè etid sa a, ou ka kontakte enstriktè gradye mwen an Dana Sherman DNP, APRN, ANP-BC, FNP-BC nan (305) 348- 2247 oswa Lissa Bazile APRN, MSN, DNP elèv kòm (954) 512-4679.

Si ou ta renmen pale ak yon moun sou dwa ou pou yo te yon sijè nan etid rechèch sa a oswa sou pwoblèm etik ak etid rechèch sa a, ou ka kontakte Biwo FIU nan Entegrite Rechèch pa telefòn nan 305-348-2494 oswa pa imèl nan ori@fiu.edu.

Patisipasyon ou nan rechèch sa a se volontè, epi ou pa pral penalize oswa pèdi benefis si ou refize patisipe oswa deside sispann. Ou ka kenbe yon kopi fòm sa a pou dosye ou. Tout kesyon klinik ak pwoblèm yo ta dwe dirije yo sou doktè trete ou.

Appendix D

# **COVID-19 Vaccination Awareness Program Questionnaire**

1)	Age:		
2)	Ethnicity:	_	
	Have you received any of the approved NO, why not?	COVID-19	vaccines? (Circle One) Yes or No
4)	How would you rate your knowledge of presentation? (Circle One)	the COVID	0-19 vaccine PRIOR to the
	1- No Knowledge		4- Moderate Knowledge
	2- Little Knowledge		5- Extreme Knowledge
	3- Some Knowledge		
5)	How did you learn about the COVID-1	19 vaccines?	(Circle One)
6)	<ul> <li>1- Television</li> <li>2- Newspaper/ Magazine</li> <li>3- Websites</li> <li>4- Family and Friends</li> </ul> How confident were you in the COVID-	6- 7-	<ul> <li>Healthcare Provider (ex: doctor, nurse, nurse practitioner, physician assistant)</li> <li>Health Officials (Center for Disease Control, World Health Organization)</li> <li>Social Media (ex: Facebook)</li> </ul> PRIOR to the presentation? (Circle)
	One)		
	1- No confidence		4- Moderately confident
	2- Barely confident		5- Extremely Confident
	3- Neutral		
7)	With the information provided to you to you, how likely are you willing to take t		
1-	Not Likely	4-	Moderate likely
2-	Somewhat not likely	5-	Extremely likely
3-	Neutral		

8)	How would	you rate the	COVID-19	<b>Vaccination</b> A	Awareness 1	Program?

1- No Benefit

4- Moderate Benefit

2- Little Benefit

5- Extreme Benefit

3- Neutral

# 9) How many chronic illnesses have you been diagnosed with? (Circle One)

1- (0-3 medical conditions)

2- (4-7 medical conditions)

3- (8 or greater medical conditions)

# 10) How would you rate your knowledge of the COVID-19 vaccine AFTER the presentation? (Circle One)

1- No Knowledge

4- Moderate Knowledge

2- Little Knowledge

5- Extreme Knowledge

3- Some Knowledge

Thank you for participating in the COVID-19 vaccine awareness quality improvement project. ☺

Survey Citation: Malik, A. A., McFadden, S. M., Elharake, J., & Omer, S. B. (2020).

Determinants of COVID-19 vaccine acceptance in the US. EClinical Medicine, 26, 100495.

# COVID-19 Pwogram Konsyantizasyon Vaksinasyon Kesyonè

1)	La	j:				
2)	Et	nisite:				
3)	Es	ke ou te resevwa nenpòt nan vak	sen COVID-19 a	<b>pwouve yo?(Sèk Youn)</b> Wi oswa Nor		
Si	non	ı, poukisa?				
<b>4</b> )	Ki	jan ou ta evalye konesans ou sou	vaksen COVID-	19 la? (Sèk Youn)		
	1-	Pa gen konesans	4-	Konesans modere		
	2-	Ti Konesans	5-	Konesans ekstrèm		
	3-	Kèk Konesans				
5)	K	i jan ou te aprann sou vaksen CC	OVID-19 yo? (Sèl	k Youn)		
	1-	Televizyon	6-	Ofisyèl Sante (Sant pou Kontwòl		
	2-	Jounal / Magazin		Maladi, Organizationganizasyon		
	3-	Sit wèb		Mondyal Lasante)		
	4-	Fanmi ak Zanmi	7-	Medya sosyal (ansyen: Facebook)		
	5-	Founisè Swen Sante (ansyen: dok	tè,			
		enfimyè, enfimyè pratikan, asistar	1			
		doktè)				
<b>6</b> )	Ki	Ki jan ou gen konfyans nan vaksen COVID-19 la ANVAN prezantasyon an? (Sèk Youn				
	1-	Pa gen konfyans	4-	Modere konfyans		
	2-	Apèn konfyans	5-	Trè konfyans		
	3-	Net				
<b>7</b> )	Av	èk enfòmasyon yo ba ou jodi a, s	i disponib epi rel	kòmande pou ou, ki jan ou vle pran		
	va	ksen COVID-19 la? (Sèk Youn)				
	1-	1-Pa gen chans	4-	Modere gen anpil chans		
	2-	Yon ti jan pa gen anpil chans	5-	Gen anpil chans		
	3-	Net				

8) Ki jan ou ta evalye Pwogram Konsyar	ntizasyon Vaksinasyon COVID-19 la?			
1- Pa gen Benefis	4- Benefis modere			
2- Ti Benefis	5- Benefis ekstrèm			
3- Net				
9) Konbyen maladi kwonik ou te dya	gnostike ak? (Sèk Youn)			
1- (0-3 kondisyon medikal)				
2- (4-7 kondisyon medikal)				
3- (8 oswa plis kondisyon medikal)				
10) Ki jan ou gen konfyans nan vaksen COVID-19 la APRE prezantasyon an? (Sèk Youn)				
1- Pa gen konfyans	4- Modere konfyans			
2- Apèn konfyans	5- Trè konfyans			
3- Net				
Mèsi pou patisipe nan pwojè amelyorasyon	kalite vaksen COVID-19 la. ☺			

**Sitasyon Sondaj:** Malik, AA, McFadden, SM, Elharake, J., & Omer, SB (2020). Detèminan nan akseptasyon vaksen COVID-19 nan peyi Etazini an. *Medikal klinik*, 26, 100495.

# **COIVD-19 Vaccination Awareness Program Questionnaire Scoring**

1)	Age:	(+1 point)
2)	Ethnicity:	(+1 point)
	Have you received any of the ap No (Yes= 0 points, No = +1 poin NO, why not?	
4)	TT 11	L. L CAL. COVID 10
<del>4)</del>		ledge of the COVID-19 vaccine PRIOR to the let to No knowledge = 2 points, Some Knowledge = 1 point,
	Moderate to Extreme Knowledge	
	1- No Knowledge	4- Moderate Knowledge
	2- Little Knowledge	5- Extreme Knowledge
	3- Some Knowledge	
5)	How did you learn about the C	COVID-19 vaccines? (Circle One)
	<ol> <li>Television (+1 point)</li> <li>Newspaper/ Magazine (+1 point)</li> <li>Websites (+1 point)</li> <li>Family and Friends (+1 point)</li> <li>Healthcare Provider (ex: doct nurse, nurse practitioner, phy assistant) (+0 points)</li> </ol>	(+0 points) 7- Social Media (ex: Facebook) (+1 point)
<b>6</b> )	How confident were you in the	COVID-19 vaccine PRIOR to the presentation? (Circle
	One) (Barely to No confidence = Confidence = 0 points)	2 points, Neutral= 1 point, Moderate to Extreme
	1- No confidence	4- Moderately confident
	2- Barely confident	5- Extremely Confident
	3- Neutral	
7)	you, how likely are you willing	to you today, if made available and recommended for to take the COVID-19 vaccine? (Circle One) (Not to utral = 1 point, Moderate to Extreme Likely = 0 points)
1-	Not Likely	3- Neutral
2-	Somewhat not likely	4- Moderate likely

- 5- Extremely likely
- 8) How would you rate the COVID-19 Vaccination Awareness Program? (+0 points)
- 1- No Benefit

4- Moderate Benefit

2- Little Benefit

5- Extreme Benefit

3- Neutral

- 9) How many chronic illnesses have you been diagnosed with? (Circle One)
- 1- (0-3 medical conditions) (+ 1 points)
- 2- (4-7 medical conditions) (+2 points)
- 3- (8 or greater medical conditions) (+3 points)
- 10) How would you rate your knowledge of the COVID-19 vaccine AFTER the presentation? (Circle One) (Little to No knowledge = 2 points, Some Knowledge = 1 point, Moderate to Extreme Knowledge = 0 points)

1- No Knowledge

4- Moderate Knowledge

2- Little Knowledge

5- Extreme Knowledge

3- Some Knowledge

Thank you for participating in the COVID-19 vaccine awareness quality improvement project. ☺

**Score Range:** 2-15 points

**Risk Calculator: 2 – 5:** Medium Risk **6-10:** Strong Risk **11-15:** Extreme Risk

Collectively all questions will be to assess COVID-19 Risk and willingness to get vaccinated and vaccination rates among African Americans ages 55 and up.

Survey Citation: Malik, A. A., McFadden, S. M., Elharake, J., & Omer, S. B. (2020).

Determinants of COVID-19 vaccine acceptance in the US. EClinical Medicine, 26, 100495.

# Appendix G



# **Vaccine Site** Locations

#### **Publix at Sunrise Blvd**

1415 East Sunrise Blvd.

Fort Lauderdale, FL 33304

#### Publix at Galleria

2501 E Sunrise Blvd.

Fort Lauderdale, FL 33304

#### Publix at Las Olas

601 South Andrews Ave.

Fort Lauderdale, FL 33301

#### Coral Ridge Shopping Center (PUBLIX)

3400 N. Federal Hwy.

Fort Lauderdale, FL 33306

#### Walmart

2500 W. Broward Blvd.

Fort Lauderdale, FL 33312

#### The Harbor Shops (PUBLIX)

1940 Cordova Rd.

Fort Lauderdale, FL 33316

#### WHAT TO EXPECT AFTER THE SHOT?

On the Arm:

Pain, Swelling and Redness

#### Throughout the Body:

Tiredness, headache, muscle pain, chills, fever and nausea

# **COVID-19 VACCINATION AWARENESS**

Can the COVID-19 vaccine make you sick with COVID? NO

After getting the COVID-19 Vaccine will I test positive for COVID-19? NO

Will COVID vaccine alter my DNA? NO



If I already had COVID-19, do I still need a





# COVID-19 **VACCINATION AWARENESS**

Lissa Bazile MSN, APRN, FNP-C



### WHAT IS COVID-19?

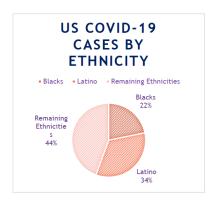
COVID-19 is an infectious disease caused by the corona virus. Can cause severe illness and death in older adults and adults with chronic health care issues.

#### **SYMPTOMS OF COVID-19**

Fever, Cough, Shortness of Breath or Difficulty Breathing, Fatigue, Headache, New loss of smell or taste, Sore throat, Congestion or Runny Nose, Nausea, Vomiting or Diarrhea, Muscle or Body Aches

# 4 WAYS TO PREVENT





#### **COVID-19 FACTS**

- African Americans and Latinos make up 21.8% and 33.8% of COVID-19 cases and only make up 13 and 18% of the population
- ✓ 95.6% COVID-19 deaths 50+ years old
- ✓ 26.8% COVID-19 deaths were black or Latino
- ✓ 32.9% COVID-19 cases were black or Latino
- ✓ 34.8% COVID-19 cases 50+ years old
- ✓ PFIZER is 95% effective AFTER 2<sup>nd</sup> Dose
- ✓ MODERNA is 94.1% effective AFTER 2<sup>nd</sup> Dose
- ✓ BOTH vaccines are given in the muscle and given in two doses

For More Information regarding COVID-19 Vaccines Please Visit:

Florida Department of Health

 $\frac{https://floridahealthcovid19.gov/vaccines/v}{accine-locator/}$ 

Center for Disease Control and Prevention

https://www.cdc.gov/coronavirus/2019-ncov/index.html



# Appendix H



### Sit Vaksen

#### **Publix at Sunrise Blvd**

1415 East Sunrise Blvd.

Fort Lauderdale, FL 33304

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Fort Lauderdale, FL 33304

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#### Walmart

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Fort Lauderdale, FL 33312

#### The Harbor Shops (PUBLIX)

1940 Cordova Rd.

Fort Lauderdale, FL 33316

# Efè segondè posib

#### Sou bra ou:

Doulè, Anflamasyon, wouj

#### Nan tout kò a:

Fatig, maltèt, doulè nan misk, frison, lafyèv

### Kesyon Komen sou Vaksen COVID-19

Èske vaksen COVID-19 la ka fè ou malad ak COVID? NO



Aprè mwen fin pran vaksen COVID-19 la, èske map teste pozitif pou COVID-19? **NO** 

Èske vaksen COVID ap chanje ADN mwen

Si mwen te deja gen COVID-19, èske mwen toujou bezwen yon vaksen? WI

Èske vaksen an ap anpeche mwen pran COIVD-19? **WI** 



# **Kesyon Komen** sou Vaksen COVID-19

Lissa Bazile MSN, APRN, FNP-C



### Ki sa ki COVID-19?

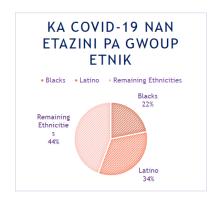
COVID-19 se yon maladi enfektye ke kowona viris te lakòz. Ka kòz maladi grav ak lanmò nan pèsonaj ak granmoun ki gen pwoblèm maladi swen sante kwonik swen.

### Ki Sentòm pou w chèche?

Lafyèv, Tous, Souf kout oswa Difikilte pou l Respir, Fatig, Maltèt, Nouvo pèt nan pran sant oswa gou gòj fè mal, Bouch oswa Nen k ap koule, Noze, Vomisman oswa Dyare, Doulè Misk oswa Doulè nan Kô

## 4 Fason ou ka anpeche COVID-19





### **COVID-19 Reyalite**

- Afriken Ameriken ak Latino fè 21.8% ak 33.8% ka nan COVID-19 ak fè sèlman 13 ak 18% nan popilasyon an
- ✓ 95.6% Moun ki mouri pa COVID-19 ki te gen laj 50+
- ✓ 26.8% Moun ki mouri pa COVID-19 ki te nwa oswa Latino
- ✓ 32.9% Ka COVID-19 moun ki te nwa oswa Latino
- ✓ 34.8% Ka COVID-19 moun ki te gen laj 50+
- ✓ PFIZER 95% efikas aprè 2<sup>zyèm</sup> dòz la
- ✓ MODERNA 94.1% efikas aprè 2<sup>yèn</sup>
  dòz la
- ✓ Tou le de vaksen Piki nan misk la ak 2 Dòz

Pou plis enfòmasyon konsènan vaksen COVID-19 Tanpri vizite:

Florida Department of Health

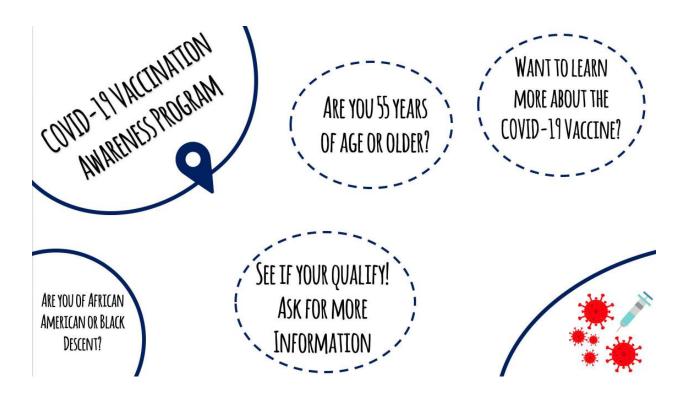
https://floridahealthcovid19.gov/vaccines/vaccine-locator/

Center for Disease Control and Prevention

https://www.cdc.gov/coronavirus/2019-ncov/index.html



# Appendix I



### Appendix J

July 08, 2021

Dr. Dana Sherman Clinical Associate Professor Nicole Wertheim College of Nursing & Health Sciences Florida International University

Dear Dr. Sherman,

Thank you for considering Manor Medical Care to participate in the implementation of Lissa Bazile's quality improvement. It is understood that Lissa Bazile will be conducting this quality improvement project as part of the requirements for the Doctor of Nursing Practice program at Florida International University. After reviewing the proposal of the project titled "increasing COVID-19 vaccination awareness and immunization in the African American ages 55 and up- A Quality Improvement Program" she has been granted permission to conduct the project at Manor Medical Center.

The project will be implemented at Manor Medical Center and will occur during a two- week time frame, using a survey questionnaire to assess the impact of the intervention. The organization is aware of staff participation in supporting the student to complete this project, including allowing the student to access the facility, provide informational letter, deliver educational intervention and provide survey to recruited participants. All educational interventions and assessments will be provided virtually.

The project aims to assess if a COVID-19 vaccination awareness program targeting African American patients ages 55 years and up, will increase COVID-19 vaccination awareness and acceptance rates. The project will be implemented with consent and voluntary participation of patients seeking care at Manor Medical Center. Prior to implementation of the project, the Florida International University Institutional Internal Review Board will evaluate and approve the procedures to conduct this project. Research supports, lack of knowledge regarding COVID-19, COVID-19 vaccines and the vaccine approval process has left many citizens questioning efficacy and acceptance. While the disease continues to rapidly spread and the US currently leading globally with over 33 million cases and over 600,000 deaths, health care professionals have a responsibility to culturally educate minority populations. Building confidence with knowledge can assist in improving vaccination rates.

I look forward to collaborating with you and your team to successfully implement Ms. Bazile's COVID-19 vaccination awareness quality improvement project. Best wishes for a successful application.

With best regards,

Dr. Yves Jodesty, M.D. Manor Medical Center 1000 NW 10° Ave.

Fort Lauderdale, FL 33311 Phone: (954) 728-9200

### Appendix K



# Office of Research Integrity Research Compliance, MARC 414

#### **MEMORANDUM**

To: Dr. Dana Sherman

**CC:** Lissa Bazile

From: Maria Melendez-Vargas, MIBA, IRB Coordinator

W

Date: September 29, 2021

**Protocol Title:** "Increasing COVID-19 vaccination awareness and immunization in the

African American ages 55 and up- A Quality Improvement Program"

The Florida International University Office of Research Integrity has reviewed your research study for the use of human subjects and deemed it Exempt via the **Exempt Review** process.

**IRB Protocol Exemption #:** IRB-21-0421 **IRB Exemption Date:** 09/29/21 **TOPAZ** 

**Reference #:** 110757

As a requirement of IRB Exemption you are required to:

- 1) Submit an IRB Exempt Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved prior to implementation.
- 2) Promptly submit an IRB Exempt Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
- 3) Submit an IRB Exempt Project Completion Report Form when the study is finished or discontinued.

**Special Conditions:** N/A

For further information, you may visit the IRB website at <a href="http://research.fiu.edu/irb">http://research.fiu.edu/irb</a>.

MMV/em