MINORITIES AND PRIMARY HEALTHCARE

PROMOTING THE USE OF PREVENTIVE SERVICES AND PRIMARY HEALTHCARE AMONG MINORITIES IN WASHINGTON DC

OREOLUWA SHASANYA

SCHOOL OF BUSINESS AND GRADUATE STUDIES

TRINITY WASHINGTON UNIVERSITY

Submitted to Dr. Kelley Wood on behalf of the faculty of the School of Business and Graduate Studies in partial fulfillment of the degree requirements for the Master of Science Administration in Public and Community Health

Fall 2018

Executive Summary

Over the years, Washington DC has experienced an increase in the number of minority population, hence the need to focus on improving minority health. Research has shown that minorities in Washington DC are more likely to have a shorter life expectancy and higher death rate in comparison to non-minority populations. Perceived discrimination can cause minorities to neglect the use of preventive services and primary healthcare. Several factors determine the perception of healthcare services minorities receive, this includes patient-provider communication, cultural competency of health professionals, experience of racism and the experiences of others from the same race or other minority races.

The goal of this program is to improve the health outcomes of minority residents in Wards 1&2, Washington DC, and this can be achieved by increasing the rate at which minorities utilize preventive screenings and primary healthcare services. To achieve this goal, this program partners with the DC prevention centers in Wards 1&2 to provide cultural competency trainings for healthcare professionals for a better understanding of cultural differences which in turn improves patient provide communication. Alongside the cultural competency trainings, minority residents in Wards 1&2 will undergo health education trainings, to increase the awareness of health promoting lifestyles. The Health belief model will be infused in the health education curriculum to allow participants gain a better understanding of the problem and seek to change behavior. After the trainings, participants are expected to begin implementing change and utilizing the resources provided. A minimum of 200 participants will be referred to the DC prevention centers in their respective wards and paired with physicians that completed the cultural competency training for preventive screenings at a subsidized rate.

Interpreters and interpreting devices will be provides to facilitate effective communication between healthcare providers and minority patients who do not speak English. Subsequently, a peer education program will be developed, using minority participants who successfully completed the 1-year program, to encourage the promotion of healthy behavior among new participants.

I, Oreoluwa Shasanya, acknowledge I completed this assignment in the spirit of the Trinity Washington University policy regarding academic honesty and plagiarism.

Table of Contents

Page

List of Tables

Page

List of Figures

Page

Introduction

According to the Institute of Medicine, healthcare administered should be "safe, effective, patient centered, timely, efficient, and equitable"' (IOM 2001). The use of these services can be neglected and reasons for negligence has been seen to include patients' perception of healthcare quality Healthcare quality from the recipients' perspective encompasses effective patient-provider communication, healthcare provider respect, and cultural sensitivity of the healthcare workforce, while Health professionals mostly perceive quality in terms of scientific performance and the results obtained (Ali 2013). Perceived healthcare quality can vary from person to person, and the difference in quality of care has been associated with multiple factors. The inequality that exists in healthcare is known as health disparity; which is the "difference or gap in health status between varying racial and ethnic groups. Health disparities are influenced by socioeconomic and educational status, race, culture, ethnicity, and other population characteristics" (Patti 2017:5).

Patient-provider communication is an important factor that determines the perception of healthcare quality among minorities. In a study conducted by Bagchi, Af Ursin, and Leonard (2012) on multiracial participants, most minorities revealed that patient-provider communication is more effective when the physicians pay attention to patients' emotional needs, are aware and mindful of cultural differences between patients and providers, and disclosure by patients will be improved if physicians take a caring and empathetic approach when communicating with patients.

In the United States, minorities have been and are currently the major groups affected by discrimination in the healthcare system. Individuals who perceive or experience some form of health-related discrimination tend to avoid going for preventive screenings/primary care and mostly use emergency rooms. Hence, to close this gap, investing in healthcare services that addresses the key needs of ethnic minorities at community level will improve access and use of preventive services. Research suggests that the availability of culturally sensitive healthcare services will help close the disparity in rate of preventive service use between the minority population and others, as well as ensure improved perception of healthcare quality received (Quinn et al, 2017).

Population and Needs Assessment

Research has shown that minorities are the most affected by discrimination in the Healthcare system. A research conducted by Cobb, Espy and King (2014) showed that American Indian/Alaska Native women over 40 years old were less likely to have had a breast cancer screening in the past 2 years in comparison to White women. HIV screening in minority women were significantly higher, because it is a mandatory screening in prenatal care A research conducted by Cuffee et al (2013) on

African Americans with hypertension shows that racial discrimination was associated with lower adherence to medication, and this was partially related to lack of trust in physicians. Discrimination can affect the use of preventive services, it has also been associated with reduced likelihood of exhibiting health-seeking behavior (Boggavarapu et al 2014).

Asians consist of a heterogeneous group of people with diverse cultures and languages, they are also often underrepresented in minority studies. South eastern Asians are less likely than other Asians to use preventive services, this is due to language barriers because they are less likely to be born in the United States, more likely to be older at the time of immigration, more likely to have stayed in the United States for shorter periods and more likely to speak a different language at home (Nguyen et al., 2011). Asian Indians report lower cancer screening number than whites and other Asians, this is because foreign born Asians consider screenings unnecessary when there is not noticeable presence of disease (Mehrotra, Gaur, and Petrova, 2012).

MacIntosh et al (2013) displays how self-identified or socially assigned race affects health status and the use of preventive services of non-Hispanic (Minority) and white individuals using three groups of participants based on how they self-identified and were socially assigned: Minority/Minority (M/M), Minority/White(M/W) and White/White(W/W). The results showed that self-identified minorities who are socially assigned as white (M/W) self-reported better health condition, while self-identified minorities who are socially assigned as Minorities (M/M) reported a lower health condition. Also, racial minorities are more likely to participate in screening programs that adopt more culturally appropriate outreach strategies and methods. It was also noted that racially ambiguous Hispanic Americans that are white passing have the potential of benefiting from being socially assigned as white.

Lack of trust that originates from the experiences of other individuals from one's race can also affect the way minorities seek or utilize preventive services. A comparative study on flu vaccination between African Americans and Whites shows that African Americans were more skeptical and concerned about the flu vaccine and the process and referred to the Tuskegee Syphilis Study as justification for their concern (Quinn et al 2017). Studies have shown that segregation affects a broad spectrum of care including diagnostic, screening, and preventive services (White, Hass and Williams, 2012; Carreon and Baumeister, 2015). Emerging research suggests that specific subgroups of blacks remain at risk, and health promotion efforts should focus on specific barriers of this group (Arthur and Katkin 2006; Blanchard & Lurie 2005). Research conducted by Gwede et al (2010) reiterates that U.S. blacks are a diverse, multi-ethnic, multicultural community and there is need for a larger-scale community-based study to elucidate and address disparities among subgroups of this population.

The immigrant population from minority races are also included in the minority population of the District of Columbia and they are less likely than US-born Americans to receive preventive and screening services (Rodriguez and Bustamante, 2009; Zallman et al, 2013), they are also less likely to visit a doctor on a regular basis and are often more dissatisfied with their care (Ye et al, 2012; Ku and Matani, 2001). According to the US census bureau (2008-2012) the population of Foreign-born Population from Africa in the District of Columbia is 15% (Gambino, Trevelyan and Fitzwater, 2014).

The U.S. Census Bureau News states that "there is an increase in diversity of the U.S population which poses cultural challenges that, unlike the past call for paradigm shifts in how we think about achieving equitable healthcare for all. These demographic shifts are projected to create a more diverse population by 2042 when minorities will comprise more than one third of the U.S. population" (Harris, 2010). The African-immigrant group is a rapidly rising new population in the United States (Capps, McCabe and Fix, 2012), and according to DC Healthy People 2020 Framework "more individuals who are foreign-born are relocating to the District than ever before and are more likely to experience obstacles in accessing care, and therefore are underserved by the health care system" (Putzer, 2016, 37).

Because immigrants make up the smaller fraction of the minority population in the District of Columbia, they are at a larger disadvantage because they usually are not properly integrated into the American culture. Research conducted by Orom (2016) on the perceptions of healthcare quality among immigrant individual's show that patient centered provider communication and having a regular provider were associated with perceived quality of care. Acculturation which is defined as the level to which immigrants adapt to the host culture (Venkatesh et al 2013, Misra and Hunte 2016) has an impact on perceived healthcare quality; for instance, immigrants with limited proficiency report lower satisfaction with care and lower understanding of their medical situation (Derose, Escarce, and Lurie 2007, Adegboyega and Hatcher 2016).

According to the U.S. Census Bureau (2017), the population of Washington DC based on race comprises of Whites alone-45.1%, Blacks-47.1%, American Indian and Alaskan Native-0.6%, Asian-4.3%, Native Hawaiian and other Pacific Islanders-0.1%, two or more races-2.7%, Hispanic or Latino-11%. Based on the map below, the color clusters show the rate of racial segregation in the District of Columbia, the minority residents of Wards 1&2 will be the major focus of this program.

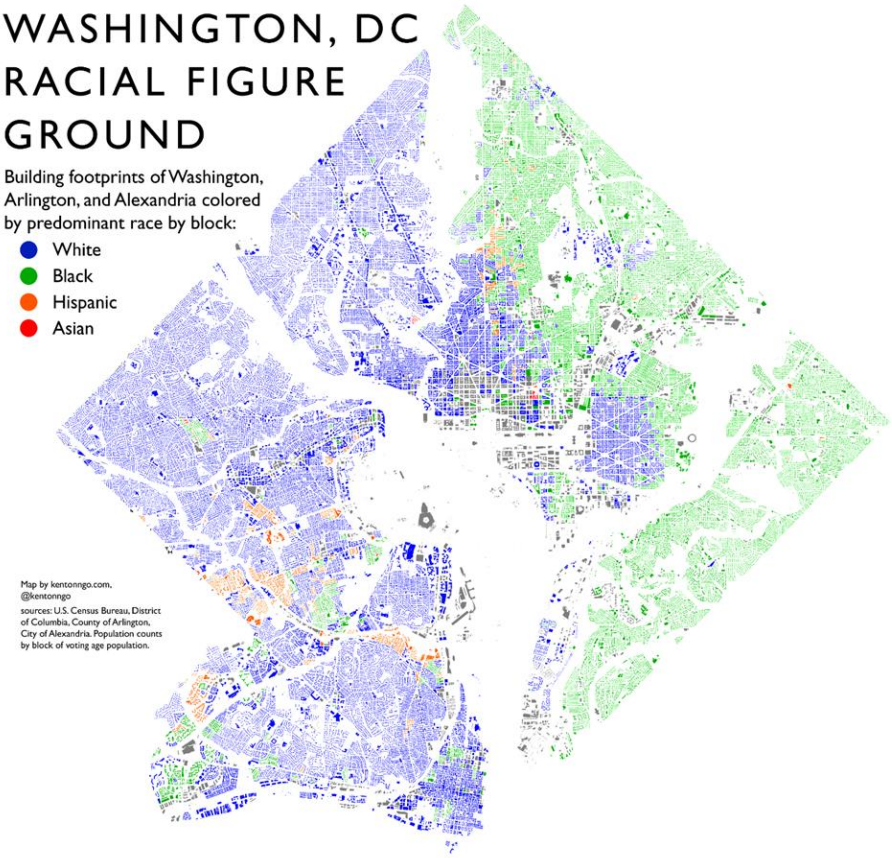

Figure 1. Racial distribution in the District of Columbia and Virginia, populated from the United States Census Bureau (Ngo, 2015)

According to DC Department of Health (2011), the percentage of adults that undergo routine checkup in Washington DC experienced a decline from 78.1% in 2010 to 68.0% in 2011. The rates for Wards 1&2 were 68.0% and 70.1% which are the lowest compared to other wards in the District of Columbia. Also, Wards 1&2 had the lowest percentage of adherence to hypertension medication by individuals diagnosed with the disease (67.4% and 71.1%) as at the year 2011. Wards 1&2 had the 1st and 3rd highest percentage of adults who engaged in unhealthy behavior. Records as of 2016 shows that African Americans had the highest mortality rate in the District of Columbia (CDC, 2016). The life expectancy of the Black population is also far less than whites; "White males in the District are expected to live almost 15 years longer than Black males and White females in the District are expected to live approximately 9 years longer than Black females" (Georgetown University School of Nursing and Health Studies, 2016)

Preventive screenings are essential because they help in early detection of diseases, and early treatment of these diseases which either completely eradicates the disease or prevent further escalation by maintaining health. Also, findings from these screenings are used to create control

measures for preventing the spread of infectious diseases. Avoiding preventive screenings and the use of primary healthcare has a serious long-term effect on the health of individuals, illnesses will deteriorate and may be untreatable when it reaches its chronic stage. Also, most individuals that skip primary care visits may end up in the emergency room when their health worsens, thereby creating more traffic to the emergency rooms. Therefore, if minorities receive information on how to engage in health promoting habits, perceived discrimination is reduced, healthcare professionals gain adequate cultural competency skills, and there is effective patient-provider communication, an increase in the use of preventive services and improvement in the overall health outcomes of minorities in the District of Columbia will be noticed.

Statement of the Problem

The barriers to quality healthcare for minorities include ineffective patient-provider communication, which is directly linked to language barriers, the lack of provider cultural competency and perceived discrimination. This program aims to increase the use of preventive services and primary healthcare by minorities in Washington DC through health education; increase awareness of minorities on the importance of these services, building an effective patient-provider communication system, and creating a more culturally competent health workforce. These interventions are expected to reduce the perceived discrimination by fostering equity irrespective of race and increase the trust between minority patients and physicians.

Theory for Change

Theories for understanding health behavior and initiating behavior change can be used for improving the health outcomes of minorities in Washington DC. By increasing the knowledge of the participants and aiding an improved thought process, these individuals' health behavioral patterns are prone to change positively. The theories to be used for health behavior change are the Health Belief Model and the Transtheoretical Model. To increase the cultural competency of healthcare workers and physicians, the Transtheoretical model will be used. This model which is also known as the stages of change model provides a step by step process for developing a sense of awareness among health workers, implementing the necessary practice to initiate change and ultimately changing the unwanted behavior.

Health Belief Model (HBM)

The theoretical basis of the Health Belief Model was created by Mayhew Derryberry, Godfrey Hochbaum, Stephen Kegeles, Hugh Leventhal and Irwin Rosenstock (Esparza-Del Villar, 2017), this model will be used to determine how patient perceptions of benefits, barriers, threat and self-efficacy

influences the rate at which individuals use preventive service. Health Belief Model is a cognitive model that attempts to identify patterns of healthy behavior (Zare *et al*, 2016). The HBM has been used to explain the adoption of single preventive behaviors, such as vaccination and screening, illness prevention and sick-role behaviors (Baranowski, 2003, Bishop *et al*, 2015, Hochbaum, 1958, Janz, and Becker 1984, & Rosenstock, 1974). This model has also been used as an evaluating tool, to measure the effectiveness of health education program for injury prevention among high school students, using pre-intervention and post intervention surveys (Cao, Chen and Wang, 2014). The HBM has been used to explore how health-care provider behavior can influence patient perceptions of patient safety and the likelihood of patient involvement in patient safety behaviors (Bishop et al, 2015). A study conducted by Zare et al (2016) using the Health Belief Model to create health education programs showed that HBM based education "could positively affect prostate cancer preventive behaviors of individuals by improving their knowledge level and leaving positive effects on perceived susceptibility and severity as well as considering the perceived barriers, benefits and health motivations".

In this program, the Health belief model will be used as a tool for assessing how increased awareness on the need for preventive services and primary healthcare influences the disposition of minorities to using these services. The Health Belief Model constructs will be used as benchmarks for measuring the impact of the health education on program participants.

Health Belief Model Constructs:

Perceived susceptibility: Rosenstock, (1974) describe perceived susceptibility as the probability of obtaining a disease or being harmed due to engaging or not engaging in a behavior (Bishop et al, 2015). In this aspect of the HBM, the participants will give an account of their beliefs on how the neglect of use of preventive services will affect their health. This will include views on how likely avoiding screenings or vaccines will result in disease and complications from a disease/condition.

Perceived severity/ Perceived threat: Participants' beliefs on how serious the complications from an unprevented or untreated disease will be, the perception of its effect on quality of life, finance, and how it impacts their lifespan etc.

Perceived benefits: This is the perception of individuals on the benefits of engaging in a healthy behavior. It focuses on the effectiveness of healthy behavior in reducing the threat of the condition (Glanz, Rimer, and Viswana, 2008; Zare et al, 2016). Participants will give an account of the advantages they can derive from constantly using preventive services.

Perceived barriers: This is the potential negative aspects of a healthy behavior (Zare et al, 2016). Participants will describe the obstacles that prevent the use of preventive services. Examples of these barriers can be lack of motivation, insurance, family problems, transportation, perceived discrimination etc.

Cues to action: These are the factors that prompt engagement in health-promoting behaviors, which in this case is use of preventive services. Cues to action will be designed for participants who believe they have a high perceived susceptibility, severity, benefit, and are willing to act and receive assistance needed to reduce the perceived barriers. A study conducted by Matterne and Sieverding (2008) on the cues to action that cause men to attend early detection cancer screenings shows a strong association between physician's recommendation and participation, followed by family members' recommendation, and Information from health insurance providers. Media cues was high across all groups and no significant differences were observed, pointing to a possible saturation effect of information from the media. Cues to action for this study will include increasing patient-physician communication and establishing relationships that provide African immigrants with information and motivation to increase the use of preventive services, media will also be used as a portal for providing information on the benefits of engaging in this healthy behavior.

Self-efficacy: Self-efficacy refers to an individual's perception of his or her competence to successfully perform a behavior (Glanz, Rimer, and Viswana, 2008).

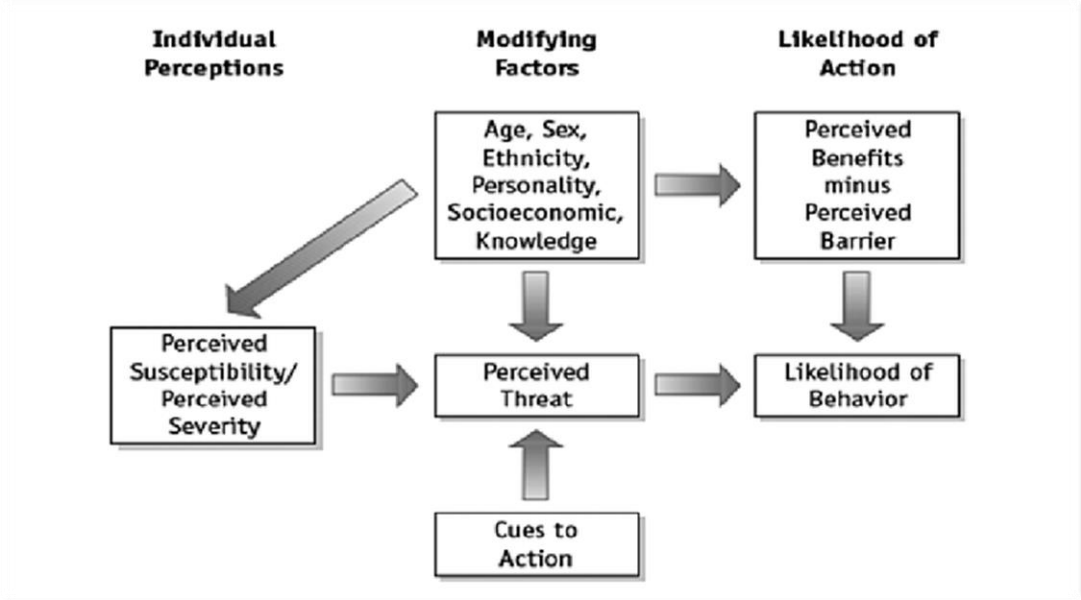

Figure 2. The Health Belief Model (Glanz, Rimer, and Viswana 2008)

Transtheoretical Model (TTM)

Transtheoretical Model is a behavior change model that was developed by Prochaska and DiClemente, and other associates (Mendes, 2013). According to Glanz, Rimer, and Viswana (2008), there are several constructs of the model, including stages of change, decisional balance, self-efficacy, and the processes of change. The stages of change include pre-contemplation, contemplation, preparation, action, and maintenance.

Pre-contemplation: Individuals at this stage of change do not have intentions of adopting the healthy behavior. This can be because of undermining the effects of the unhealthy behavior they engage in. Sometimes such individual might have made unsuccessful attempts at change; this can lead to demoralization about the ability to change. These groups of people are not motivated to change behavior (Glanz, Rimer, and Viswana, 2008). The participants' perception of susceptibility and severity disease/sickness due to neglect of preventive services can affect their intention to change. If the perceived susceptibility and severity is low and the perceived barrier is high, such individuals may not choose to change unhealthy behavior.

Contemplation: In this stage, individuals have intentions to change in the next six months. They are more aware of the pros of changing but are also acutely aware of the cons (Velicer *et al*, 2000).

Preparation: This is when an individual is planning on making a behavior change within the next month. They have typically taken some significant action in the past year. These individuals have a plan of action, such as joining the health education class, consulting a counselor, but still engage in the high-risk behavior Velicer *et al*, 2000, Lenio, 2006 p.75).

Action: At this stage there is progress and the problem behavior is absent and the individual has made specific modifications in his lifestyles within the past six months. Since action is observable, behavior change is often equated with action (Glanz, Rimer, and Viswana, 2008, Velicer *et al*, 2000). Not all modifications of behavior count as action in this model. People must attain a criterion that scientists and professionals agree is sufficient to reduce risks for disease. The Action stage is also the stage where caution against reverting to unhealthy behavior should be taken (Velicer *et al*, 2000). Participants begin to make use of preventive service referrals and regularly visit the doctor.

Maintenance: In this stage people work to prevent relapse and secure their gains made during action (Lenio, 2006). They will apply the change processes less and less frequently as they move beyond action. They are less tempted to relapse and increasingly more confident that they can continue this healthy behavior (Velicer *et al*, 2000).

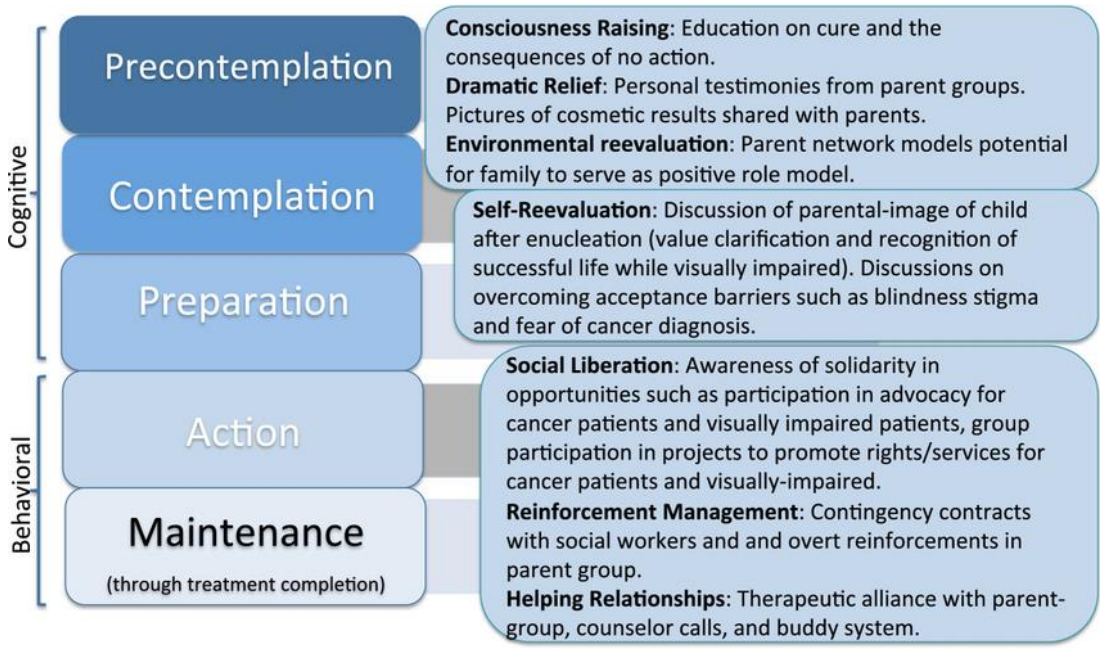

Figure 3. TTM stages by processes of change for interventions to improve global retinoblastoma and childhood cancer outcomes (Weaver, Heminger and Lam, 2014).

The stages of change model was reported effective when used for building exercise behavior among overweight women (Baysal and Hacialioglu, 2017). Studies on adopting a physical activity behavior using TTM has shown that the transition between different stages of the TTM is highly dependent on the levels of self-efficacy (Romain et al, 2018). Although, TTM has been successfully used in numerous behavior change studies, limitations still exist. A study by Prochaska has shown that prior to successfully changing unhealthy behavior, most individuals relapse several times, which causes a re-entry to the contemplation stage (Rossi, 1993), This is a major concern because it creates a problematic cycle and prevents the program goals from being achieved.

Program Design

This program is designed to examine perceived discrimination and increase the use of preventive services among the minority residents of Wards 1&2 Washington, District of Columbia. It consists of three phases, each phase being crucial to achieving the program goals. The structure of this program is such that allows synchronized growth in the populations of concern (DC prevention center health professionals and minority residents of Wards 1&2), then a pairing at the last phase is done to ensure that the effects of three phases is utilized to produce the desired outcome.

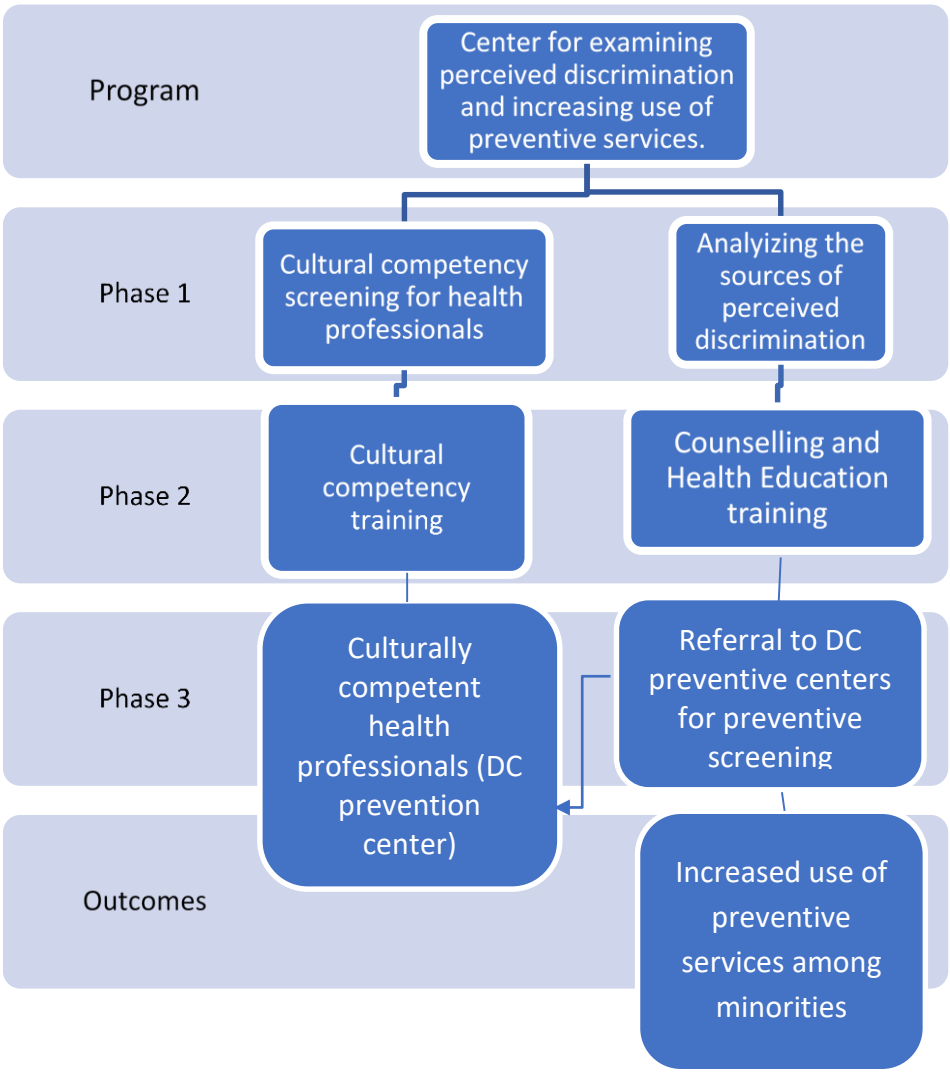

Figure 4. Program Plan

Program Goals

This program aims at analyzing and addressing stigma associated with accessing preventive services among minority residents of Wards 1& 2 in the District of Columbia (DC). This intervention consists of 2 sections;

- Intervention for increasing the cultural competency of Physicians and increasing patient-physician communication (Cultural competency training).

- Intervention for reducing perceived discrimination and increasing the use of preventive services among minorities (counselling, health education, and referral for preventive screening).

Goal 1

To improve patient-provider communication, which will bridge the understanding gap between the minorities and health professionals.

Objectives

- Partner with the DC Prevention centers in Wards 1 & 2, run training programs for health professionals within these facilities, and use these centers as the referral centers for program participants in these wards.
- Partner with the Cross-Cultural Health Care Program (CCHCP) to conduct cultural competency trainings for physicians, nurses and administrators.
- Use of interpreters and interpreting devices to facilitate effective communication between healthcare providers and minority patients.

Goal 2

To increase the rate at which minority residents of the District of Columbia use preventive and primary care services and improve their overall health outcomes.

Objectives

- Conduct health education trainings for program participants.
- Recruit and coach peer educators amongst the minority participants of Wards 1 & 2 to encourage the promotion of healthy behavior among new participants.
- Provide subsidized preventive screening for at least 200 participants in the pilot phase of the program.

Theoretical Model

The theoretical model for this program uses a combination of the Health Belief Model and the Transtheoretical Model. The first stage of this intervention model involves a pretest, this test shows the current state of program participants. Interview and survey methods will be used to get reports on sources of discrimination, participants will report experiences in medical facilities and the other reasons for avoiding preventive and primary healthcare services. This test will be created using the HBM constructs (perceived susceptibility, severity, benefits, and barriers). This pre-test is also the

precontemplation stage of the Transtheoretical Model, where the participants do not have the intentions to change. The results from this test will be used in creating a comprehensive health education curriculum, which is the next stage of the intervention program. The participants in the health education training stage, also the contemplation stage of the transtheoretical model, where the knowledge gained from the trainings educates them on the advantages of using preventive care, primary healthcare and other health promotion practices. The next stage of this model is the post-test, where participants are assessed on the knowledge gained from the health education training and their willingness to move forward in the program. At this stage, the participants who are unsure about indulging in healthy behavior or decide to opt out of the program will be identified.

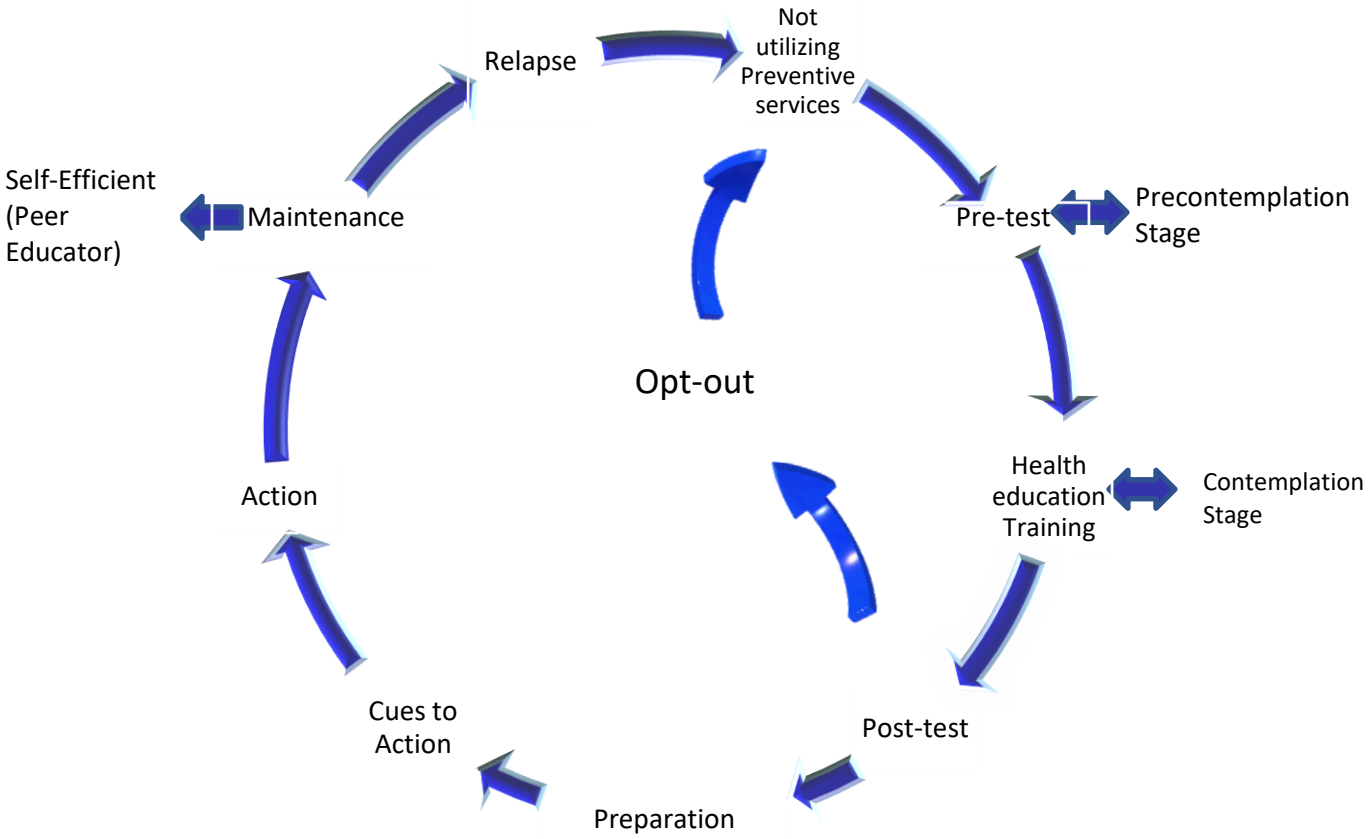

Figure 5. The Theoretical Model for increasing the use of preventive services and primary healthcare in Wards 1& 2, Washington DC.

The preparation stage of this intervention model is the point where the types of preventive screenings required for individuals (based on age, gender and other factors) are determined, participants with or without insurance are identified, and the preventive screenings covered by insurance is documented. Cues to action will include fixing screening appointments, and providing the

necessary tools needed for participants to easily assess these services e.g. transportation, day care services for participants with children, interpreters for non-English speaking participants etc. The action stage is the point where participants begin to undergo the required preventive screenings and use the primary healthcare services provided. Participants at the maintenance stage are expected to have a developed the habit of seeking healthy behavior, these individuals will be recruited into the program as peer educators for newer participants. Peer education is known to be a very effective method used for community-based programs, it will be used as a means of giving members of Wards 1 & 2 a sense of inclusion in the program. Participants who stop seeking health promoting behaviors move to the relapse stage of the model, these individuals will be encouraged to start the intervention process from the beginning.

The healthcare professionals at the DC Prevention centers, Wards 1& 2 will follow a similar change path. At the pretest/ precontemplation stage, participants do not think that current practices causes patients to avoid screenings or treatments, therefore are not contemplating changing behavior. It is expected that during the cultural competency training, participants have a better understanding of the need for cultural competency and begin to consider changing or improving current practices. The post-test/ preparation step involves the use of questionnaires and surveys to determine the participants' current state of mind. Results should reflect changes effected by the cultural competency training, and participants are willing to act. At the action stage, health professionals at the prevention centers have adopted culturally competent and patient centered practices. Minority participants have been referred to the preventive centers and are reporting an improvement in service delivery and physician practices. Information gathered from both minority participants and the health professionals show adoption of effective patient-provider procedures. The maintenance stage is the point where health professionals continuously practice the more effective methods and are constantly seeking improvement to prevent reversion to old conducts.

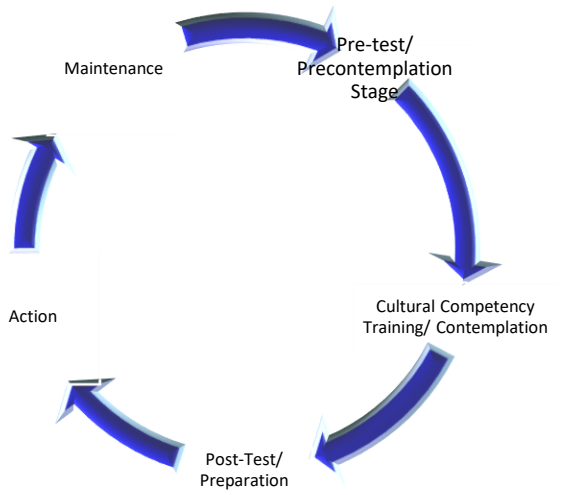

Figure 6. Theoretical Model for Health Professionals at DC Prevention centers, Wards 1& 2 Washington DC.

Activities

The pilot phase of this program will be carried out in Wards 1 & 2; therefore, the participants of this program will be minority residents in both wards. To ensure a successful program, participants are to be referred to prevention centers where the cultural competency training program is conducted and matched with physicians that complete the training. This program is in partnership with DC prevention centers in the respective wards. For the sake of this pilot phase, the participants of the cultural competency training will be healthcare workers at the DC prevention center Wards 1 & 2 (with more focus on the physicians). All participants will be informed about the program goals, then the program activities begin.

Pre-test

- A survey pre-test will be conducted to evaluate the perceptions of participants before the health education training using the HBM constructs. Results from this test will be used in building the curriculum to ensure that the training provided caters to the needs previously identified.
- Pre-test for physicians at the DC Prevention Centers in Wards 1 & 2. This test will be carried out using questionnaire containing self-assessment and across-the-board questions. Physicians and health administrators at these centers will be asked to identify and categorize improper or proper communication techniques and obstacles to effective patient-provider communication.

Training

- Health education training sessions on health promotion, disease prevention and the importance of preventive care.
- Cultural competency training on
    - Diversity, Equity and Fundamentals of Cultural Competency,
    - Increasing Awareness of Unconscious Personal and Organizational Bias,
    - The Impact of Culture on Communication.

Post-test

- The minority participants will undergo a post-test towards the end of the health education training. Participant results will be divided into two groups;
    - The first group of participants are those whose results indicate a successful transition from contemplation to the preparation stage of the Transtheoretical model. This group of participants move on to the next phase of the program.
    - While the second group are those whose results reflect stagnancy in either the pre-contemplation or the contemplation stages of the Transtheoretical model. These individuals are then interviewed to better understand the barriers to behavior change, and additional measures will be put in place to ensure that these difficulties are subjugated. Willing participants will be advised to take the newly designed training.

Stages of Change

- The participants at the preparation stage of the Transtheoretical model are then equipped with needed tools for preparation and the other stages as they move along the stages of change.

Referral

Participants that at the preparation stage are matched with the physicians who have successfully completed the cultural competency training to ensure a successful program.

Expected Outcomes on Participants

- Minority participants are expected to have attained self-efficacy towards exhibiting health promoting lifestyles.
- Healthcare workers are expected to be more culturally competent after the program. The patient-provider communication is expected to improve
- An improvement in the health status of the minority participants is expected.

Program Plan and Implementation

Initial efforts of this intervention program will include; securing a location, designing, equipping the space, and creating a fully functional program center. This will be managed by the appointed project manager in collaboration with design engineers, IT personnel, vendors, and other contractors. The planning and execution of this project should be completed in 75days, then recruitment of program staff, minority participants and volunteers will follow. The office space rented will be used as physical address for the recruiting process, the location will be at proximity to Wards 1&2.

Volunteers will be needed to provide a wide-range of assistance during the program e.g. administrative assistance, support health educators during training programs and workshops, assist the program director, coordinator, and participants to ensure a smooth-running program. Recruitment of program staff, volunteers and minority participants will be done in a space of 3months. The program director, coordinator, health educators, counsellors will be recruited on qualification basis while volunteers will be recruited based on availability and willingness of individuals. For recruiting volunteers and minority participants, information will be disseminated through posters and fliers, face to face solicitation, and advertisement on social media platforms. A website will be created, this website will give information on the program objectives and requirements participants need to meet (age, and place of residence), also a portal for applicants to indicate interest will be included on the website. Eligible participants will be selected, minority participants will be engaged in briefing about the program, and volunteers will undergo training.

Program participants will be allocated into focus groups, these groups will meet twice a week for 1 month and engage in discussions about perception of healthcare quality they receive, past experiences when seeking healthcare, and general knowledge on health. Information acquired from these focus groups will be used to assess and identify the factors that influence perceived discrimination among this population. Also, knowledge-based tests to assess physicians' cultural competency will be carried out.

Using the information gathered from the focus group activity, health educators will develop a comprehensive health education syllabus to increase knowledge and promote healthy choices among participants within 2weeks of focus group meetings completion. Participants will undergo health education training for 3 months, meeting 3 times a week. Participants will be required to complete brief surveys after each training session to evaluate the effect of the health education. Health educators will also collaborate with CCHCP staff to develop Cultural competency training content that addresses perceived discrimination. Cultural competency training for physicians at DC Prevention Centers Wards 1&2 will be carried on concurrently. Knowledge based post-tests for minority

participants and health professionals will commence. This test will assess the effectiveness of ongoing health education training and cultural competence training.

Participants that successfully complete the health education training will be registered in the referral program, where the pairing process of minority participant with culturally competent physicians will begin.

Tasks

Timeline & Gantt Chart

Table 1. Program Timeframe, showing the tasks, duration and number of days for task completion.

Task	Duration	No of days
Planning and team meetings	01 Jan-15 March	75
Recruitment	01 March- 31 May	92
Focus group meetings	09 June- 04 July	26
Curriculum Preparation	24 June- 08 July	15
Health Education Training	08 July-30 Oct	115
Cultural Competence Training	08 September- 30 Oct	53
Referral	04 Nov - 21 Dec	48
Program Evaluation	25 Nov- 31 Dec	37

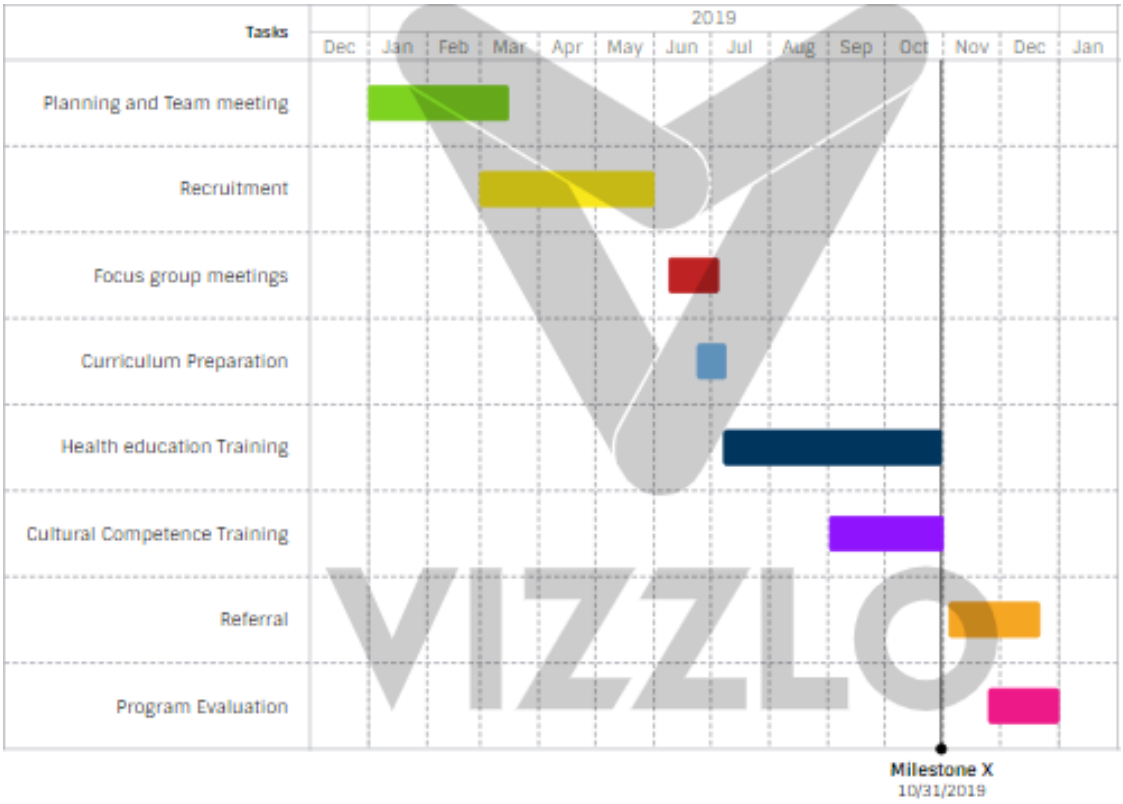

Table 2. Gantt chart showing tasks and timeline for completion of activities.

Communication Outreach

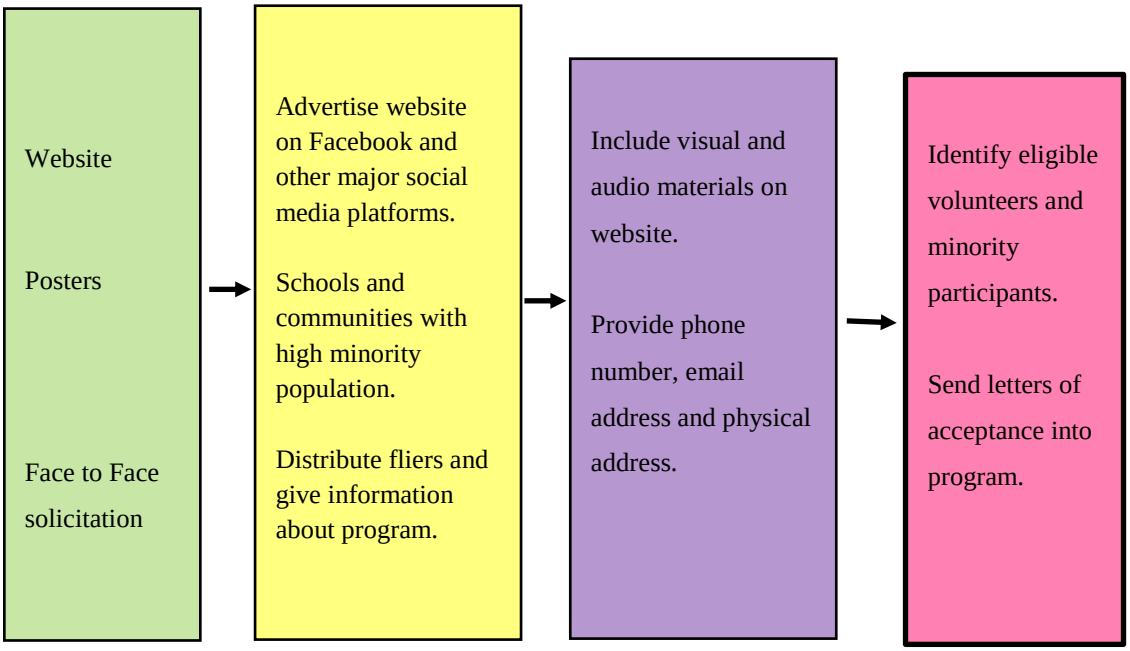

Figure 7. Communication Plan.

Organizational Resources

Human resources

Program Director: The Program Director will oversee the program and ensure that it runs smoothly. The program director will be responsible for assigning tasks and supervising processes.

Program Coordinator: The Program Coordinator's duty is to ensure that all program activities are carried out in an organized and timely manner, and the expected goals for the program are accomplished. Also, the Program Coordinator will initiate and maintain effective collaboration between program participants, employees, volunteers, and contractors (Cross Cultural Health Care Program, DC Prevention Center Wards 1&2), throughout the program. The Program Coordinator will organize frequent meetings with the groups involved in the program to ensure that they all understand the program objectives, their roles, and are aiming towards achieving the program goals.

Project Manager: A project manager will be appointed at the beginning of the project to ensure that all project activities (which includes space rental, equipment purchase, furnishing and equipping center, accommodation and logistics) meet the program specification. Also, the project manager will be responsible for cost/contract negotiations and maintaining a good working relationship between vendors and contractors throughout the project. The project manager will be most needed at the initial stage of the planning process.

Counselor: The counselor will be responsible for counselling individuals that have experienced discrimination and are willing to receive therapy.

Health educators: Four health educators will be hired, these individuals will oversee focus groups, curriculum creation, training sessions, and workshops. The Health educators

Volunteers: Volunteers will be needed to assist the program staff from the initial planning face to till the referral phase. Volunteers will be paid a stipend biweekly.

The Cross-Cultural Health Care Program staff (CCHCP): The CCHP will be contracted to conduct the cultural competence training of the health workers at DC Prevention Centers Wards 1&2

Physical Resources

These include the program venue, Print media (posters and fliers), Training materials, Furniture's, Desktops, and other electronic equipment.

Office Supplies

They include stationery, first aid kits, and miscellaneous supplies.

Knowledge and Information Sharing

Information needed from minority participants includes: Name, Date of birth, Age, Race, Home address, Phone number, Email address, Social Security number, Medical and Insurance data etc. Risk analysis will be carried out to determine potential threats that can compromise the safety of participant's information, and control measure established to prevent unauthorized data access. VPN and Firewall will be set up to control network traffic and create a barricade between trusted and untrusted networks. Personal data will be kept safe and secure using data encryption to ensure that only authorized parties have access to information, also physical and electronic access will be limited to the Program Director and Coordinator at the program center.

An application software for data collection will be used to store participant's information, while the program website will be used for storing general information, which can be accessed, by volunteers and program participants. The website will include a secure portal for program volunteers, and Health Educators to gain access to information needed to facilitate program activities.

Participants will be made aware of the need to share personal data with the prevention centers handling screening and treatment services and will be asked to sign a written informed consent form to this effect. Information to be shared with the respective DC Prevention centers will be sent via secured email, and access to this information will be limited to the division in charge of receiving referred patients at the prevention centers. Additional information collected by the prevention centers which includes; participant's current medical conditions and history, allergies and medications, results of preventive screenings, treatments provided and number of contact with physician at the prevention center will be kept confidential in accordance to the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

Budget

Each program cycle last for a year, therefore a 1-year budget has been prepared to show the cost of hiring personnel, equipment and supplies from start to finish of one program cycle.

Table 3. 1-year Program Budget (OTPS: other than personal service).

	Personnel		
Core Team	Program director		$ 45,000.00
	Program coordinator		$ 40,000.00
	Project Manager		$ 10,000.00
	Counselors		$ 5,000.00
	Health educator 1		$ 15,000.00
	Health educator 2		$ 15,000.00
	Health educator 3		$ 10,000.00
	Health educator 4		$ 10,000.00
	Volunteers Stipend		$ 20,000.00
		Subtotal	**$170,000.00**
OTPS		Office space	$ 30,000.00
	Equipment	Server	$ 5,000.00
		Software	$ 5,000.00
		Webhosting	$ 2,000.00
		IT Support	$ 5,000.00
	Supplies:	general office supplies	$ 2,000.00
		desktop computers	$ 5,000.00
	Curriculum materials:	Development & copyright	$ 1,000.00
	Other OTPS:	Print media	$ 1,000.00
		Transportation	$ 3,000.00
	Contingency Budget		$ 20,000.00
		Subtotal	**$ 79,000.00**
External 1	CCHCP	Personnel	$ 35,000.00
		Transportation	$ 6,000.00
		Housing	$ 9,000.00
		Subtotal	**$ 50,000.00**
External 2	DC Prevention center		
		Services	$ 50,000.00
		Subtotal	**$ 50,000.00**
		TOTAL	**$349,000.00**

Budget Justification

The Program director will oversee the entire program and is required to be committed 100% to the program and preceding projects. The Program coordinator is expected to be involved in the program from planning stages to execution stage. The coordinator will oversee program tasks, ensuring deadlines are met and processes are going as expected.

The Project Manager's expertise is required at the center set up stage, which includes space rental, designing, equipment purchase, and furnishing. The program activities will take place at the program center.

A counselor will be contracted to come in once every week to provide counselling for select individuals. Four Health educators will be hired to build curriculum and conduct the health education trainings/workshops, which will be completed within a 6-month period and makes up 50% of the program content and timeframe.

Volunteers will be needed for administrative tasks, providing support to the program director, coordinator, and health educators. These individuals are the backbone of this program and are essential to the successful completion of the major program goals and objectives.

An office space/program center is needed to carry out all program related activities, e.g. recruitment, focus group meetings, health education trainings, and client referral. It is important to provide a suitable environment for program staff to function effectively and a conducive center participants, equipment's, furniture, and office supplies are required. These supplies include Note pads, stamps, pens, first aid boxes, and desktop computers.

Accommodation will be provided for the CCHCP trainers in a reasonably priced DC Hotel for the cultural competence training duration and transportation to and from the hotel to the training center is required. The budget includes the amount needed to subsidize the cost of screening services participants will receive. This fund goes to the DC Prevention centers and is calculated based on the number of services rendered and the percentage subsidized. A contingency budget is included in the overall budget to cover any excessive or underestimated cost; this money will not be allocated to any task initially but will be used to augment any extra cost.

Assessment and Evaluation

Program assessment will be carried out by the Program Director, Coordinator, and volunteers, the stages of assessment will include: health education training phase, cultural competency training phase, referral phase, and the phase where participants are recruited as peer educators. These

assessments will thoroughly examine the effectiveness of the program design and implementation plan to ensure that program goals and objectives are met.

To assess learning outcomes for minority participants, after each training session, a survey questionnaire or interview method will be used, and participants will be allowed to choose their preferred assessment method. During interviews, the project coordinator will document how well participants grasp the training courses, the difficulties encountered, participant's complaints, and contributions. The survey will also cover these aspects. A post-test will be conducted at the end of the health education training sessions, to monitor progress and measure the effectiveness of the curriculum. A successful health education training program should result in increased knowledge of participants on health improvement and maintenance practices, disease prevention, health damaging behaviors, and the desire to adopt health promoting lifestyles.

Healthcare workers at the DC prevention centers will be required to undergo pre-evaluation briefing, to inform them of the reasons for the training and what is expected of them at the end. Pre-training tests will be carried out using case studies to assess the current practices of employees at the DC prevention centers. Post-training tests will also be carried out using the same method, and results will be compared to pre-training test results to measure the effect of the cultural competency training. The cultural competency training is successful if participants are more conscious of the culture differences that exist among patients, have a better understanding of patient's needs and adopt culturally competent practices,

To measure the success of the referral process, data on the rate at which participants show up for appointments and adhere to physician recommendations will be collected from the DC prevention centers. To measure performance of physicians and other health workers at the prevention centers, participants will be required to take service satisfaction surveys after visits. The program director will monitor the cases in need of interpreters and interpreting devices, and ensure the services provided meet the needs of the participants.

Information gathered from these assessments will be used to detect lapses or flaws of the current program design and make changes where needed. Overall success of this program will be achieved if 85% of minority participants reach the referral stage, undergo preventive screenings, receive healthcare services, and 30% participate in the peer education program.

A review on the percentage of completion will be carried out at the end of the referral program. The program coordinator will compare information received and expected outcome to evaluate the impact and effectiveness of the program. The efficiency of program processes will be documented, and modifications made to ensure continuous improvement in program methods.

Sustainability

For initial program funding, grants will be solicited from foundations, corporations, local, state, and federal government agencies who have a history of supporting programs aimed at improving the wellbeing of the minority population. To increase the program's chances of getting adequate funding, a high number of grant sources will be sought after. Thorough research on potential donors will be carried out, and grant applications sent out. Donors are expected to share the interests and goals of the program, and we intend to constantly engage and build a long-lasting relationship with our program donors.

A number of organizations known to fund minority health programs in the DC area are Boat People SOS, Inc, National Hispanic Medical Association, Health Research Inc, Community Education Group (CEG), Cafritz Foundation etc. Donors will be encouraged to initiate planned support, such as bequests and endowment funds for long-term security of the program.

Other sources of earning income will be adopted to generate revenue for the program. This includes but is not limited to renting out conference rooms at the program center, accepting property donations and antiques to be sold at fundraising auctions, offering consulting and health education services to other organizations.

To ensure continuous funding, an annual fund campaign will be used. Funds will be raised to establish a sustainable stream of income. Funds from this campaign will be invested, and the income generated from the investment used for program operational expenditures. For program continuity, methods to cut down on hiring costs will be implemented. Peer educators are required in subsequent years to reduce the cost of hiring four Health Educators; also recruiting more volunteers will help cut down costs.

Summary

Health disparities among minority populations are often a result of discrimination, socioeconomic disadvantage, or access to care. Minority populations are the major groups affected and usually have a bad perception of the healthcare system. This program aims at reducing perceived discrimination, increasing access, and subsidizing the cost of preventive and primary healthcare services of minority residents in Wards 1 & 2, District of Columbia. To reduce perceived discrimination, it is crucial to implement measures of increasing patient-provider communication. This program partners with the DC prevention center and engages the health professionals in a cultural competency training course. According to the current statistics, it is evident that improving the health status of the minority

population in the District of Columbia should be a priority. This program will serve as an avenue to increase the awareness of health issues and cultivate health-promoting habits among the minority residents of Wards 1 & 2. Also, this program provides the preventive screening services required to prevent and detect illnesses at an early stage which reduces the risk of developing diseases and conditions. This implementation strategy benefits the District of Columbia by producing a healthy minority population and culturally competent health workforce.

References

Adegboyega, Adebola O. and Jennifer Hatcher. 2016. "Unequal Access: African Immigrants and American Health Care." *Kentucky Nurse* 64 (1): 10-12. https://search-proquest-com.proxytr.wrlc.org/docview/1789757998?accountid=14407.

Ali, M. M. 2013. "Healthcare Service Quality: Towards a Broad Definition." *International Journal of Health Care Quality Assurance, 26*(3), 203-19. doi: http://dx.doi.org.proxytr.wrlc.org/10.1108/09526861311311409

Arthur, C. M., and E. S. Katkin 2006. "Making a Case for the Examination of Ethnicity of Blacks in United States Health Research." *Journal of Health Care for the Poor and Underserved, 17*(1), 25-36. doi: http://dx.doi.org.proxytr.wrlc.org/10.1353/hpu.2006.0017

Bagchi, A. D., R. Af Ursin, and A. Leonard. 2012. "Assessing Cultural Perspectives on Healthcare Quality." *Journal of Immigrant and Minority Health*, 14(1), 175-82. doi:http://dx.doi.org.proxytr.wrlc.org/10.1007/s10903-010-9403-z

Baranowski, T., K. W. Cullen, T. Nicklas, D. Thompson, and J. Baranowski. 2003. "Are Current Health Behavioral Change Models Helpful in Guiding Prevention of Weight Gain Efforts? **. *Obesity Research, 11*(10), 23S-43S. doi: http://dx.doi.org.proxytr.wrlc.org/10.1038/oby.2003.222

Baysal, H. Y., and N. Hacialioglu. 2017. "The Effect of a Transtheoretical Model-based Education and Follow-up on Providing Overweight Women with Exercise Behavior." *International Journal of Caring Sciences, 10*(1), 225-234.

Bishop, A. C., G. R. Baker, T. A. Boyle, and N. J. MacKinnon. 2015. Using the Health Belief Model to Explain Patient Involvement in Patient Safety. *Health Expectations*, *18*(6), 3019-3033. doi: 10.1111/hex.12286

Blanchard, J., & N. Lurie. 2005. "Preventive Care in the United States: Are Blacks Finally Catching up?" *Ethnicity & Disease, 15*(3), 498-504.

Boggavarapu, S., K. M. Sullivan, J. T. Schamel, and Frew. 2014. "Factors Associated with Seasonal Influenza Immunization among Church-going Older African Americans." *Vaccine, 32*(52), 7085-7090. doi: http://dx.doi.org.proxytr.wrlc.org/10.1016/j.vaccine.2014.10.068

Cao, Z., Y. Chen, & S. Wang 2014. "Health Belief Model Based Evaluation of School Health Education Programme for Injury Prevention among High School Students in the Community Context. *BMC Public Health, 14*, 26. doi: http://dx.doi.org.proxytr.wrlc.org/10.1186/1471-2458-14-26

Carbonari, J. P., and. C. CDiClemente. 2000. "Using Transtheoretical Model Profiles To Differentiate Levels Of Alcohol Abstinence Success." *Journal of Consulting and Clinical Psychology, 68*(5), 810-817.

Capps, R., K. Mc Cabe, and M. Fix. 2012. Diverse Streams: African Migration to the United States. Retrieved 11/3/2014, from http://www.migrationpolicy.org/research/CBI-african-migration-united-states

Center for Disease Control and Prevention. 2016. Underlying Cause of Death, 1999-2016 Results. Assessed on Dewcember 1, 2018. https://www.cdc.gov

Cobb, N., D. Espey, and King, J. 2014. "Health Behaviors and Risk Factors among American Indians and Alaska Natives, 2000-2010." *American Journal of Public Health, 104*(3), S481-9. Retrieved from https://search-proquest-com.proxytr.wrlc.org/docview/1532451409?accountid=14407

Cuffee, Y.L., J. L. Hargraves, M. Rosal, B. A. Briesacher, A. Schoenthaler, S. Person, and Allison Jeroan. 2013. "Reported Racial Discrimination, Trust in Physicians, and Medication Adherence among Inner-City African Americans with Hypertension." *American Journal of Public Health*, 103(11), e55-62.

District of Columbia Community Health Needs Assessment. D.C. Department of Health. doh.dc.gov/page/district-columbia-community-health-needs-assessment. Accessed December 1, 2018.

Derose, K. P., J. J. Escarce and N. Lurie. 2007. Immigrants and Healthcare: Sources of Vulnerability. *Health Affairs* (Millwood), 26(5), 1258-1268. doi:10.1377/hlthaff.26.5.1258

DiClemente C. C, J. O. Prochaska S. K. Fairhurst, W. F. Velicer , M. M. Velasquez and J. S. Rossi 1991. "The Process of Smoking Cessation: an analysis of Pre-contemplation, Contemplation, and Preparation stages of Change." *Journal of Consulting Clinical Psychology*; 59(2):295. PMID: 203019111.

Esparza-Del Villar, O. A., P. Montanez-Alvarado, M. Gutierrez-Vega, I. Carrillo-Saucedo, G. Gurrola-Pena, N. Ruvalcaba-Romero, S. Ochoa-Alcaraz. 2017. "Factor Structure and Internal Reliability of an Exercise Health Belief Model Scale in a Mexican Population." *BMC Public Health, 17*doi: http://dx.doi.org.proxytr.wrlc.org/10.1186/s12889-017-4150-x

Gambino C.P, E.N Trevelyan and J. T. Fitzwater. 2014. "The Foreign-Born Population from Africa: 2008–2012." *American Community Survey Briefs*. https://www.census.gov/content/dam/Census/library/publications/2014/acs/acsbr12-16.pdf

Georgetown University School of Nursing and Health Studies. 2016. The Health of the African American Community in the District of Columbia: Disparities and Recommendations. Prepared for the DC Commission on African American Affairs.

Glanz K, Rimer B. K, Viswana K. 2008. *Health Behavior and Health Education*: Theory, Research, and Practice. 4th ed. San Francisco, CA: John Wiley & Sons.

Gwede, Clement K, C. M. William, K. B. Thomas, Tarver, L. Will G. P. Quinn, Susan T. Vadaparampil, and Cathy Meade. 2010. "Exploring Disparities and Variability in Perceptions and Self-Reported Colorectal Cancer Screening among Three Ethnic Subgroups of U.S. Blacks." *Oncology Nursing Forum*, 37(5), 581-91. Retrieved from https://search.proquest.com/docview/749012413?accountid=14407

Harris, G. L. A. 2010. "Cultural Competence: It's Promise for Reducing Healthcare Disparities." *Journal of Health and Human Services Administration*, (1), 2.

Hochbaum G. M. 1958. Public Participation in Medical Screening Programs: A Sociopsychological Study (PHS Publication No. 572). Washington, DC: Public Health Services.

I.O.M. (2001). Crossing the quality chasm. Washington, DC: *National Academy Press*.

Ku, L. and S. Matani. 2001. "Left Out: Immigrants' Access To Health Care And Insurance." Health Affairs.

Lenio J. A. 2006. Analysis of the Transtheoretical Model of Behavior Change. *Journal of Student Research*. Pp. 75. Retrieved from http://www2.uwstout.edu/content/rs/2006/14Lenio.pdf

MacIntosh, T., M. M. Desai, T. T. Lewis, B. A. Jones, and M. Nunez-Smith. 2013. "Socially-assigned Race, Healthcare Discrimination and Preventive Healthcare Services." *PLoS One,* 8(5) doi: http://dx.doi.org.proxytr.wrlc.org/10.1371/journal.pone.0064522

Marcus B. H, C. R. Nigg, D, Riebe and L. H. Forsyth 2000. "Interactive Communication Strategies: Implications for Population Based Physical Activity Promotion." *American Journal of Preventative Medicine*; 19(2):121–6. PMID: 1091390312.

Matterne U, and M. Sieverding. 2008. "What Makes Men Attend Early Detection Cancer Screenings? An Investigation into the Roles of Cues to Action." *International Journal of Men's Health* [serial online]. Spring2008; 7(1):3-20.

Mehrotra, N., S. Gaur, and A. Petrova. 2012. "Health Care Practices Of The Foreign Born Asian Indians In The United States. A Community Based Survey." *Journal of Community Health*, 37(2), 328-34. doi: http://dx.doi.org.proxytr.wrlc.org/10.1007/s10900-011-9449-4

Misra, R., H. Hunte. 2016. Perceived discrimination and health outcomes among Asian Indians in the United States. BMC Health Services Research, 161-10. doi: 10.1186/s12913-016-1821-8.

Nancy K. Janz and Marshall H. Becker 1984. "The Health Belief Model: A Decade Later". *Health Education & Behavior*. 11 (1): 1–47. doi:10.1177/109019818401100101

Ngo, K. 2015. The Figure-Ground of Race in Washington, DC. http://www.kentonngo.com/2015/01/29/figure-ground-of-race/

Nguyen, Giang T. E. J. Yuen, L. Hsu, K. Kue, and T. Nguyen. 2011. 'Surveying Linguistically Challenged Southeast Asian American Populations: Use of a Community-Partnered Methodology." *Journal of Health Care for the Poor and Underserved,* 22(3), 1101-14.

Orom, Heather. 2016. "Nativity and Perceived Healthcare Quality." *Journal of Immigrant and Minority Health* no. 3: 636.

Patti, R. Rose. (2017). Healthy Disparities, Diversity and Inclusion. Context, Controversies and Solutions. San Francisco, CA: Jones and Barlett Learning., p5.

Prochaska, J. O. and Carlo C. DiClemente. 2005. "The Transtheoretical Approach". In Norcross, John C. and Marvin R. Goldfried. (Ed.s) Handbook of Psychotherapy Integration. Oxford Series in Clinical Psychology (2nd ed.). Oxford; New York, NY: Oxford University Press. pp. 147–171.

Putzer, Emily. M. (2016). DC Healthy People 2020 Framework. Government of the District of Columbia Department of Health. 37.

Quinn, S. C., A. Jamison, V. S. Freimuth, G. R. Hancock, and D. Musa, 2017. "Exploring Racial Influences on Flu Vaccine Attitudes and Behavior: Results of a National Survey of White and African American Adults." *Vaccine*, 35(8), 1167-1174.

Rodriguez M. A., A. V. Bustamante and A. Ang. 2009. "Perceived Quality of Care, Receipt of Preventive Care, and Usual Source of Health Care among Undocumented and Other Latinos." *Journal of General Internal Medicine*. 24 (Suppl 3):508–13.

Romain, Ahmed Jérôme, Johan Caudroit, Marie Hokayem, and Paquito Bernard. 2018. "Is there Something Beyond Stages of Change in the Transtheoretical Model? the State of Art for Physical Activity." *Canadian Journal of Behavioural Science* 50, no. 1 (01): 42-53.
Rosenstock I. M. (1974). Historical origins of the health belief model. Health Education Monographs; 2: 328–335.

Rossi, S. R. (1993*).* "Application of the Transtheoretical Model of Behavior Change to Dietary Fat Reduction in a Naturalistic Environment." (Doctoral dissertation). University of Rhode Island.

US Census Bureau. 2008. U.S. Census Bureau News. (2008). H Uhttp://www.census.gov/Press-Release/www/releases/archives/populationU. August 14. UAccessed January 20U H, 2009.

US Census Bureau. 2017. "QuickFacts: District of Columbia". Retrieved September 10, 2018.

Velicer, W. F., J. O. Prochaska, J. L. Fava, S. J. Rossi, C. A. Redding, R. G. Laforge, and M. L. Robbins. 2000. Using the Transtheoretical Model for Population-based Approaches to Health Promotion and Disease Prevention. *Homeostasis in Health and Disease,* 40, 174-195.

Velasquez M. M, k. von Sternberg, C. L. Dodrill L. Y. Kan and j. T. Parsons. 2005. "The Transtheoretical Model as a Framework for Developing Substance Abuse Interventions." *Journal of Addiction Nursing*; 16(1–2):31–40. 13.

Venkatesh S, L. J. Weatherspoon, S.A. Kaplowitz, and W.O. Song. Acculturation and Glycemic Control of Asian Indian Adults with type 2 Diabetes. *Journal of Community Health*. 2013; 38(1):78–85.

Weaver, S. Meaghann, Heminger, Christina and Lam, Catherine. (2014). Integrating stages of change models to cast new vision on interventions to improve global retinoblastoma and childhood cancer outcomes. BMC public health. 14(1):944. DOI: 10.1186/1471-2458-14-944 ·

White K, J. S Hass, and D. R. Williams 2012. "Elucidating the Role of Place in Health Care Disparities: The Example of Racial/Ethnic Residential Segregation." *Health Services Research*. 47: 1278–99.

Ye, J., D. Mack, Y. Fry-Johnson, and K. Parker. 2012. Health Care Access and Utilization among US-Born and Foreign-born Asian Americans. *Journal of Immigrant and Minority Health*, 14(5), 731-7. doi: http://dx.doi.org/10.1007/s10903-011-9543-9

Zallman. L, H. Himmelstein S. Woolhandler. J. D. Bor, Andrew P, Ayanian. and D. McCormick. 2013. "Undiagnosed and Uncontrolled Hypertension and Hyperlipidemia among Immigrants in the US." *Journal of Immigrant and Minority Health*. 15:858–865. DOI: 10.1007/s10903-012-9695-2

Zare, M., F., Ghodsbin, I. Jahanbin, A. Ariafar, S., Keshavarzi and T. Izadi. 2016. "The Effect of Health Belief Model-Based Education on Knowledge and Prostate Cancer Screening Behaviors: A Randomized Controlled Trial." *International Journal of Community Based Nursing and Midwifery, 4*(1), 57-68.