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A Needs Assessment of African American Women's Risk for Cardiovascular Disease

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Abstract

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MSN, Walden University, 2012

ADN, Quincy College, 2002

Project Submitted in Partial Fulfillment

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Abstract.

Suboptimal cardiovascular health among African American (AA) women contributes to high costs of care related to acute illness, chronic illness, and disability. Using the health promotion model, this needs assessment project examined risk factors that predispose adult AA women between the ages of 21 to 64 years of age to higher incidence of cardiovascular disease (CVD). Seventy of the 300 charts that met the inclusion criteria (female AA patients, 21 to 64 years of age, receiving care in a community clinic in an urban city of Texas) were audited for this project. Descriptive analysis showed that 66% of the women did not have a diagnosis of CVD, 32% were noted as being at risk for CVD, and risk for diagnosis of CVD was not listed in 3% of the charts. The audit also showed that 7% of the AA women did not monitor their diet, 60% monitored their diet, and 33% lacked knowledge of heart healthy diet. Sixty-seven percent of charts audited noted a family history of CVD, 33% noted no family history of CVD, while 3% noted an unknown family history of CVD. The ages of the patients ranged from 21-64 (*M* = 24.9 years). Weight ranged from 104-225 lbs. (*M* = 172.5 lbs.) and height ranged between 52-73 inches (*M* = 61.13 inches). Body mass index (BMI) calculated showed 1.43% of the women were underweight, 11.4% showed normal BMI, 32.86% were overweight, and 54.29% were obese. Study recommendation included implementation of a patient education that will help increase awareness of CVD among the patient population at the clinic. Findings from this project could increase awareness on the importance of creating cultural congruent education program that will help educate minority populations more effectively in the management of cardiovascular disease.

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Dedication

I dedicate this research project to the memory of my parents, Silas and Priscilla Abanobi; to my children, Michael and Michelle, my crowning glory from God; and to all the patients who have in their own way enriched my nursing knowledge.

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A special feeling of gratitude to my sisters, brother, and their spouses; I appreciate you. And to my parents, Silas and Priscilla Abanobi, whose love for learning ignited the quest for education in their children, my ever-undying gratitude to you. To my dear friend Cheryl Kitsch, I am especially grateful for your support. To Bree, my best friend for life, you are my rock. Words cannot express how much I appreciate you. I love you, girlie. To Dr. Rose and the entire staff of Daystar Family Clinic, I will always appreciate your help and support. A special gratitude to my husband, Ify, and children, Michael and Michelle, who have always given me strength to forge on and never left my side throughout the entire doctorate program. You have been my best cheerleaders. I truly appreciate all my teachers at Walden, especially my project chair, Dr. Eileen Fowles, whose steady and sturdy guidance and patience enabled me to continue to the end. To Fidelia Ukah, my newfound mentor and friend, thank you from the bottom of my heart. Finally, unto Him who is my ever-present anchor, the great I AM, God Almighty, I give all praise and glory.

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Section 1: Introduction

Cardiovascular disease (CVD), referring to disorders of the heart and blood vessels, is one of the top causes of mortality among women in the United States. Heart disease, in particular, causes the death of 1 in every 4 women [Centers for Disease Control and Prevention [CDC], 2015d). An alarming epidemiological finding, however, is the disproportionate effect of CVD on African American (AA) women. Compared to White women, a secondary data analysis revealed that AA women have consistently higher incidence, prevalence, and mortality rates from hypertension, coronary artery disease, chronic heart failure, and stroke (Williams, 2009). A greater number of modifiable and non modifiable risk factors are contributing to the disparity. National estimates show that 80% of AA women are obese, 37% have early-onset hypertension, and 50% have high levels of blood cholesterol (National Health, Lung and Blood Institute [NHLBI] 2009). Initial investigations support the genetic susceptibility of African Americans to the hypertensive effect of too much sodium intake. In addition, 1 in 4 AA women aged 56 or older has type 2 diabetes (Office of Women's Health [OWH], 2010). Lifestyle plays a key role in the development of obesity, hypertension, type 2 diabetes, and dyslipidemia, thereby increasing the risk for CVD. Approximately 55% of AA women have been found to be sedentary (NHLBI, 2009), cultural norms also favor a high-fat, high-salt diet (Brennen, 2013). Prevention is urgently needed to reduce CVD risk factors and incidence among women and men in general and to reduce health disparity affecting AA women in particular. Addressing health disparity reduces the unequal disease burden and promotes better health outcomes in the target population.

Background

Health promotion and disease prevention are necessary in reducing health disparity. Patient education is an indispensable component of both health promotion and disease prevention, as knowledge influences individual perceptions of susceptibility, the severity of CVD outcomes even when disease is asymptomatic, and the benefits of prevention (Webster & Heeley, 2010). Such perceptions, in turn, influence personal decisions to enact behaviors such as increasing physical activity and eating a healthier diet. Conversely, lack of understanding of CVD risk factors, consequences, and effective management leads to self-care measures that are inadequate or inappropriate for prevention. A study of the CVD risk perception of urban, low-income AA women with diabetes, for example, found that the participants viewed their risk as 50% or less, whereas diabetes is a major risk factor for CVD (Allen et al., 2010). As a result of lack of knowledge, at-risk individuals may delay seeking care, fail to adhere to secondary prevention measures such as medications, and fail to sustain lifestyle change. The latter is a known issue in relation to AA women (Brennen, 2013). These behaviors hasten the development and progression of CVD, increasing AA women's morbidity and likelihood of dying from heart disease or stroke.

Context

The setting of the project is a community-based clinic with a public health orientation. Public health nursing is concerned with individual, organizational, or population-level interventions for health promotion and disease prevention. A primary consideration in public health is the receptiveness of the target patient population to

health messages and education and subsequent enactment of recommended behaviors (Rubens,et al, 2015). Cultural, language-related, social, and psychological barriers to improving awareness and behaviors that support better health are taken into account and addressed (Street & Haes, 2013). Barriers are based on the literature. Among African Americans in general, distrust of the conventional health care system is common (Durant, Legedza, Marcantonio, Freeman, & Landon, 2011) and is borne out of previous experiences of prejudice and discrimination (Armstrong et al., 2013). The lack of references to and consideration of culture-based norms and literacy level in the health literature and professional advice often reinforces distrust (Purnell, 2014). Financial hardship, multiple and interrelated social roles, and low self-efficacy also hinder optimization of education in enhancing health outcomes (Armstrong et al., 2013). These barriers warrant in-depth understanding of factors that influence risks for CVD with a focus on health behaviors and response to treatment.

Problem Statement

There is an alarming disparity in CVD incidence, prevalence, morbidity, and mortality affecting AA women arising from multiple biological, psychological, cultural, and socioeconomic risk factors, but that can be addressed in part by implementing culturally congruent health education to directly address the risk factors and decrease disparities for AA women.

Purpose Statement and Project Objectives

The purpose of this needs assessment was to assess AA women's risk for cardiovascular disease. AA women tend to have more risk factors than Caucasian

females (Williams, 2009). AA women have higher risk for CVD than Caucasian females, and they tend not to get treatment or know their risk factors. The results will guide development of quality improvement and educational activities that will further develop intervention for minority disease management education.

Significance to Practice

Recent health care reforms have emphasized health promotion and disease prevention as strategies to improve health outcomes, especially among vulnerable groups, and reduce the high cost of care. Being in the frontline of care, the Institute of Medicine [IOM], 2010) has enjoined nurses to exercise leadership in implementing reforms. This project contributes to the profession's response to the challenge by leading practice change to address health disparity in CVD affecting AA women. It highlights the need to understand the needs of AA women and barriers they often encounter, in particular cultural, language, and socioeconomic barriers in disease prevention management (Rhodes, 2013). It also contributes to the knowledge base on planning, delivering, and evaluating cardiovascular health education intended for AA women. The project further stimulates research interest in this area of practice and is needed because of the dearth in related studies. Research assists in strengthening downstream public health approaches to enhancing cardiovascular health among high-risk AA women.

Project Question

The following question guided this project: "What are risk factors that predispose AA women to cardiovascular disease?"

Evidence-Based Significance of the Project

According to the American College of Cardiology [ACC] (2013), new practice guidelines in identifying and treating cardiovascular disease include pharmacology as well as assessment for risk factors that could be modified through lifestyle changes that will prevent occurrence and/or chronicity. Evidence of effectiveness is established by using research findings to inform the development and implementation of an educational intervention as well as evaluating project outcomes. Reduction of risks as means of intervention has also informed prior clinical experiences with members of the target population. Patient preferences are taken into account again by referring to the literature. The results of the project contribute to the evidence base on interventions for CVD prevention among AA women in the community, considering the dearth of research in this area.

Implications for Social Change in Practice

Health disparity means that there is inequity in access to health care, which, in turn, means that there are barriers preventing equal access. Distrust of the health care system and socioeconomic barriers figure prominently in the literature as to why AA women and men do not receive care relative to their disease risk, leading to a greater CVD burden. The project was developed to identify reasons why AA women have higher risk factors for CVD than their Caucasian counterparts (Williams, 2009). In so doing, the project was intended to address health disparity, and access to healthcare (Braveman et al., 2011). The project promotes social change in practice by drawing attention to the issue and generating evidence for the intervention, thereby promoting culturally

congruent and community-based approaches. The evidence can be used to support local public health policies in addressing disparities in healthcare (Braveman et al., 2011), which will in this case benefit more AA women.

Definition of Terms

The following terms used in this project are defined as follows:

African American women: Adult females in the community who self-identify as African American or Black American.

Cardiovascular disease: Cardiovascular disease pertains to disorders of the heart and blood vessels and includes such conditions as coronary artery disease, chronic heart failure, stroke, and hypertension (CDC, 2015b). The demographic characteristics of participants included the type of CVD diagnosis if applicable.

Cardiovascular disease risk: Risk pertains to the quantitative probability that an individual will develop CVD (Stuart-Shor et al., 2012). Formal risk measurement is within the domain of medicine and was not performed. Rather, the number and types of risk factors a participant had were determined.

Cardiovascular disease risk factor: This pertains to the biological, individual lifestyle, cultural, and socioeconomic factors that increase the risk of developing CVD or promote disease progression (Stuart-Shor et al., 2012). Biological risk factors include genetic susceptibility, age, gender, clinical parameters such as dyslipidemia, and co morbid conditions such as obesity, hypertension, and type 2 diabetes. Lifestyle factors relate to physical activity, diet, cigarette smoking, and alcohol consumption. Cultural risk factors, as mentioned, concern historical distrust of White health care providers and the

influence of norms on diet. Socioeconomic risk factors pertain to family and peer support, stress, and income that influence access to health care.

Cardiovascular disease risk reduction: This relates to behaviors that address modifiable risk factors (Stuart-Shor et al., 2012). It includes adherence to lifestyle change and treatments. In this project, it was measured as the self-reported intent to engage in healthy behaviors following participation in cardiovascular health education.

Knowledge: Pertains to the assimilation of concepts taught during an educational session. It is measured as the difference between pre- and post-intervention test results.

Assumptions

Part of the data collected from this needs assessment was used to evaluate effectiveness of interventions that led in behaviors to reduce risk of CVD. It will be assumed that patients are aware of risk factors and have been educated by clinic staff on best practices in management of health issues that predispose them to CVD. This assumption is important because it touches upon the validity of intervention outcomes. This means that clinic staff members are expected to implement results in patient care as well as remain committed to AA women's learning. This assumption is important because it implies that the knowledge gained from the review may contribute to future educational intervention for effective CVD management.

Scope and Delimitations

The scope of the study was the assessment of AA women's need for awareness of health-related risks for CVD. Theories posit that assessments showcase knowledge and

intentions, which are two elements that influence behavior. CVD risk reduction leading to health promotion and disease prevention involve health-related behaviors such as engaging in aerobic exercise to reduce sedentariness. Assessing knowledge of risk factors that increase risk of diseases generates interventions that influence individual changes and also serves as one motivator in transforming intention into actual performance of the behavior.

Record review focused on AA women regardless of whether they had prior or current history of CVD. The sample was limited to at least 50 but not more than70 charts of African American (AA) women aged 21 to 64 years and excluded charts from non-AA women. The setting was also limited to just one clinic because of resource constraints. While AA women and men are collectively considered members of a group more vulnerable to CVD than other ethnic groups, AA women have poorer mortality rates than men. As such, the dimension of gender also needs specific focus to address disparity, hence the decision to target AA women.

Although it would have been ideal to provide individual or group counseling to influence attitudes and beliefs, foster self-efficacy, provide coaching, and develop problem-solving skills to assist in initiating and sustaining CVD risk-reduction behaviors, time constraints limited the scope of the project. However, based on the outcomes of the chart review, recommendations were made to the clinic to provide education to the patients on nutrition and adopting an active lifestyle, neither of which are being offered by the clinic at this time.

This was a retrospective study that used quota sampling to examine already collected data not initially intended for research. The use of a small sample size and only one site for the interventions prevents generalizations on the effectiveness of the intervention in the larger population of AA women. Members of this population are diverse in their risk factors, access to health care, and other characteristics, and a larger sample from multiple sites would permit a level of rigor that would enable generalizations. Moreover, knowledge-based pre- and post-tests and self-reports of intention to enhance health-related behaviors for CVD risk reduction do not directly measure the actual enactment of the behaviors. For this reason, there is no guarantee that improvement in knowledge and self-reports of intention can result in actual risk reduction, although theories do recognize the importance of knowledge and intentions in behavior change.

Limitations

There were several limitations to the study. Given the research design, it is difficult to make inferences due to the possibility that future research will show other potential explanations for the findings. In addition, the intent to perform CVD risk-reduction strategies differs based on a person's risk. For instance, a person with a lower risk may tend to delay adoption of a healthier lifestyle as compared to a person with a higher risk. To address this source of bias, individual risk factors was considered during data analysis.

Summary

AA women carry a disproportionate share of CVD risk and disease burden as seen

in higher incidence, prevalence, morbidity, and mortality rates. They have a higher level of risk arising from multiple risk factors. At the same time, the lack of culturally congruent and accessible care exacerbates health disparity. Cardiovascular health education is a public health strategy that can address disparity. Improving the awareness and knowledge of AA women about CVD and risk reduction measures can influence the intent to adopt healthier behaviors. The project aims to identify risk factors that increase risks of heart disease for AA women that can be addressed in treatment to promote cardiovascular health. Results from the study, if implemented within specified assumptions, and limitations, may generate evidence that could improve nursing practice in relation to addressing health disparities. The specific foci of the interventions assessed in this project were diet management, exercise, and compliance with prescribed care. Evidence-based practice dictates the use of research evidence as one element to inform the design and implementation of a project and foster best practices. The evidence and theoretical and conceptual models supporting the project are discussed in the following literature review.

Section 2: Review of Scholarly Evidence

Introduction

The purpose of this needs assessment was to assess AA women's risk for CVD. There is health disparity affecting AA women in regard to the risk and outcomes of CVD. A review of the literature generated support for risk assessment, an effective public health strategy for health promotion and disease prevention. There was also support for employing culturally-congruent and community-based approaches among ethnic minority groups. However, there was a dearth of studies on the effectiveness of implemented programs among AA women, with only six studies found that met the inclusion criteria. Most employed small sample sizes and were quasi-experimental. All of the studies also focused on clinical parameters such as blood pressure, weight, and BMI and/or behaviors such as healthier diets and increases in physical activity. None of the studies measured the level of knowledge after completing assessments and implementing educational interventions as a result, and only one study focused on the intention to apply what was learned by forming a physical activity group.

Literature Search Strategy

A search of the literature was done to locate relevant research on cardiovascular health issues for AA women. The following database were searched: Cumulative Index to Nursing and Allied Health (CINAHL), Medline, ProQuest, and Science Direct. The search terms were *risk factors*, *community-based*, *cardiovascular*, *heart*, *health*, *diet*, *physical activity*, *exercise*, *compliance*, *cholesterol*, *results*, *treatment*, *medications*, *screening*, *education*, *African American*, *Black American*, *women*, and *females*. The

combinations of search terms and the results are summarized in Appendix A. The scope of the literature review was full-text, English-language, and peer-reviewed work published from 2000 to the present in scholarly journals. The study settings were limited to rural or urban areas in the United States. The search included primary research, articles on conceptual or theoretical frameworks, evaluation studies, and literature and integrative reviews. Inclusion of the different types of literatures ensured a comprehensive background on the topic. Approximately 65 articles were reviewed, with about 54 out of those reviewed included in this review.

Specific Literature

One of the earliest studies on cardiovascular health promotion among AA women, Project Joy, was developed and implemented by Yanek et al. (2001). The study compared a standard behavioral change strategy without a spiritual component, standard behavioral change combined with a spiritual component, and a self-help approach in relation to improvements in weight, waist circumference, blood pressure, caloric intake, fat intake, and sodium intake. The sample size was 529 AA women with interventions, set in 16 churches was the largest of literatures reviewed for this project. The choice to employ churches as program sites was informed by knowledge that church can provide valuable social support and reinforcement and can foster self-efficacy through learning from others. During the implementation, pastors and lay church leaders adapted the basic program to suit their context and supported participants in completing the sessions and providing data for the evaluation. Focus groups and in-depth interviews of AA women, expert panel reviews, and a pilot study were conducted to identify the most appropriate

interventions. This led to 20 nutrition topics and 20 exercise topics covered by the 20 educational sessions of the curriculum. The topics included the food guide pyramid, food labels, the benefits, and limits of different types of nutrients and healthier alternatives, energy balance, portion size, food preparation, meal and snack planning, and dining out and on holidays. Meanwhile, the physical activity topics included the benefits of exercise; safety in terms of footwear, clothes, the weather, and minor injury prevention; aerobic exercises including walking; flexibility, intensity, and the effect on heart rate; and positive effects of exercising with other persons. The results showed modest and similar improvements in the standard intervention with or without the spiritual component. The reason was that the participants took the initiative to incorporate spirituality into the intervention when the study intent was to not add this element, resulting in the two intervention groups almost having the same level of spirituality. This effect was not observed in the self-help group. The study demonstrates how faith or spirituality can aid AA women's learning and enactment of health behaviors.

Awareness of risk is an important element in the reduction of CVD risk factors among AA women. Cornell et al. (2009) conducted an evaluation of the Community Advisor Program, a community-based multifaceted program implemented among residents of Union Town, Alabama. The program consisted of educational activities in the community on diet, exercise, and smoking cessation intended to enhance program awareness among residents as well as, increase individual knowledge of CVD risk factors, symptoms, and risk reduction. The intervention was also meant to improve compliance with medical management of risk and health screening by fostering readiness

to pursue behavioral changes. More intensive classes were provided to those who had difficulty self-initiating change. The classes included aerobics classes and cooking classes using healthier versions of current recipes. Lay volunteers from the community helped to design the program through focus groups similar to Project Joy (Yanek et al., 2001) and implemented the program following training. Although the program was open to all members of the community, the evaluation was conducted among AA women, considered one of the groups with the greatest need for risk reduction. The process evaluation demonstrated a high level of community engagement and use of program services. However, the study did not include an outcomes evaluation.

Parker and Logan (2010) focused on physical activity and nutrition in implementing the LIFE Project, an educational program for weight loss intended for overweight or obese rural AA women. The project was based in two sites--church and a university--and the results between these sites were compared to determine whether spirituality has an effect on lifestyle change. The need to identify risk factors and knowledge of same was identified by the AA women who participated in forums conducted for a separate study. The women had heard that healthy nutrition and exercise can prevent or be used to manage hypertension, obesity, and diabetes, but they did not know how to enact these behaviors. The lack of knowledge was reinforced by limited availability of health care services in the community, and the difficulty of talking with providers regarding this concern. Similar to Yanek et al. (2001), the intervention strategy was to incorporate the concepts of nutrition and physical activity with Biblical teaching, given that the church has a strong influence in the community. The curriculum included

building a personalized physical fitness plan and determining how to improve this plan further, as well as content of the food guide pyramid, a balanced diet, portion sizes, overeating, cooking methods, fast food, and initiating discussions with providers. Awareness was created through lectures and demonstrations in a group setting. Written literature was given to AA women as well, along with tools for self-monitoring lifestyle change progress. The results between the two sites were improvements in systolic blood pressure and weight loss, but the church-based education demonstrated additional reductions in diastolic blood pressure and BMI, thus reducing risks of CVD. This finding highlights the positive effect of spirituality on lifestyle change, as was also demonstrated in the study by Yanek et al. (2001). A qualitative evaluation of the LIFE Project showed satisfaction with the program and church participants' intent to form a walking group.

Similarly, Brennen (2013) conducted a quasi-experimental study using a sample of 16 AA women who were either overweight or obese to determine the impact of a community-based nutrition and physical activity program. The program components were diet and exercise education and counseling for the purpose of promoting a more physically active lifestyle, as well as a diet consisting of more fruits and vegetables and less salt and fat. Specific topics covered by the curriculum included creating a weight graph, meal planning, keeping a food and exercise diary, lifestyle improvement planning, and problem solving. Teaching was individualized to generate plans tailored to each woman's needs and preferences. Other program components were blood pressure reduction, building self-efficacy in diet management and exercise, and empowerment in making the right choices for lifestyle change. The intervention resulted in weight loss and

blood pressure reduction among the participants

Improving awareness of risks was similarly a useful strategy in the Decide 2 Care for You program implemented to enhance AA women's knowledge of problem solving (Lilly et al., 2014). Problem solving was essential, as there were multiple social, cultural, and environmental barriers to lifestyle change, and reducing these barriers was contingent on individual skills to be creative in overcoming them and consistently make the right choices. Teaching strategies used were didactic coaching, modeling, rehearsal, and practice, with feedback given on performance to ensure continued improvement. The outcome evaluation showed an increase in daily fruit and vegetable intake in 72% of AA female participants and an increase in daily exercise among 67% of AA women.

Education in Single-Strategy Interventions

Kannan et al. (2009) focused on nutrition through the Healthy Eating and Harambee educational intervention. The culturally sensitive curriculum was implemented by lay members of one county and attended by AA women of childbearing age. The curriculum topics included keeping food records, relating history and culture to eating patterns, the different types of nutrients, diseases that AA women are at high risk of developing, understanding the nutrition facts label, making healthier food choices, growing vegetables and herbs used in cooking, using spices in food preparation, meal planning, body image issues, and physical activity. The learning strategies employed were storytelling, responding to case scenarios, affirming one another, health fairs, and faith-based team-building. Pre and post-tests helped in determining whether the intervention led to healthier eating, cooking, and other lifestyle-change behaviors. The

results showed that more than 77% of participants engaged in at least one healthy behavior following the educational activity while 23% engaged in at least two behaviors.

Adams et al. (2015) also highlighted the need for awareness of risk factors for the success of a community-based physical activity intervention for AA women. In developing the program, the authors considered the need to empower women to initiate and sustain an increased level of physical activity. Hence, they chose the Stanford Walking Kit, which enabled personalized exercise planning so that walking could be performed safely and with integration into daily activities and family life as the women as a strategy aimed to promote adherence. The intervention involved educating AA women on how to use the Stanford Walking Kit and resulted in a significant increase in the weekly duration of walking as an aerobic physical activity compared to baseline.

A wide range of information has been used to show relationships between the risk of particular disorders and racial orientation. According to Kannan et al. (2009), African Americans have been found to be at greater risk of lifestyle diseases than White Americans. According to Pbert (2013), health behaviors mostly contribute to occurrences of these diseases. African Americans have been found to participate least in health promoting behaviors. This has increased their risk of developing CVD and other lifestyle-related conditions. Limited access to information on disease prevention and health promotion has been shown to be one of the factors that predispose AA to lifestyle diseases.

General Literature

Current Guidelines on Nutrition

The U.S. Department of Agriculture (USDA) and U.S. Department of Health and Human Services (DHHS), (2010) acknowledged the present obesity epidemic and the role of a social and environmental context that promotes unhealthy weight. Their most recent guidelines recommend that individuals establish calorie balance in the long term to prevent unhealthy weight gain and promote weight loss (DHHS, 2010). Calorie balance entails consuming only the amount of calories needed and increasing physical activity to use up excess calories (CDC, 2015c). Another recommendation is to choose food and drinks based on their nutrition density. Examples of nutrient-dense foods and drinks are fruits, vegetables, low-fat milk, whole grain, legumes, lean meat and poultry, and seafood (DHHS, 2010). Many people choose to eat less dense foods that are high in sodium, sugar, fat, and refined grains, and for this reason, cardiovascular health education must focus on teaching healthier food choices.

Current Guidelines on Physical Activity

Exercise should complement diet management in order to achieve calorie balance. The DHHS (2010) guidelines on physical activity for adults recommend performing any physical activity rather than being sedentary. However, to be considered physically active and to achieve cardiovascular health and other benefits, one has to engage in "moderate-intensity aerobic activities" (DHHS, 2010, p. 17) of 150-minute duration per week or 75 minutes of vigorous aerobic activity a week (DHHS, 2010). The duration is cumulative, as physical activity can be performed in 10-minute episodes on most days of

the week. At the same time, a combination of moderate, and vigorous-intensity activities is also an option. The ideal level is 300 minutes of moderate-intensity or 150 minutes of vigorous-intensity activities each week, and the guidelines also recommend additional exercise beyond this level, as it confers more health benefits (DHHS, 2010).

Adherence to Care

In an integrative review, Cohen and Kataoka-Yahiro (2009) underscored the findings of studies showing that patient adherence decreased when they felt overwhelmed with the number of tasks needed to self-manage their illness. The authors found that patient adherence to CVD management was low at 76.6%. Specifically, adherence was lowest with complex pharmacotherapy, showing up for scheduled provider visits, and diet modification (Cohen & Kataoka-Yahiro, 2009). As a concept, adherence pertains to "persistence in the practice and maintenance of desired health behaviors and is the result of active participation and agreement" (Cohen, 2009, p. 27). A concept analysis by Cohen (2009) revealed that the precursors to adherence in CVD risk reduction are health education, perception of risk, self-efficacy, goal setting, good decision making, and collaboration with the health care provider. The presence of antecedents leads to concordance between health recommendations and actual behavior, acquisition of new knowledge, mastery of risk-reduction strategies, and the ability to achieve goals and transcend barriers (Cohen, 2009). Ultimately, the result is an improvement in health outcomes.

Adherence is one of the important factors in the management of CVD. However, according to Cohen and Kataoka-Yahiro (2009), Africans Americans have been shown

not to adhere to treatment regimens due to the complexity of the treatment and its schedule. Most of African Americans view a strict treatment schedule as a waste of time and fail to understand its importance due to cultural belief and personal attitude to the health care system (Galanti, 2012). As a result, a number of the conditions have been poorly managed, leading to life-threatening complications. Diet is considered as one single important factor in the management of CVD. However, low socioeconomic status among African Americans influences the use of diet in CVD management.

Concepts, Models, and Theories

Cultural Congruence

The Transcultural Nursing Society (TCNS) initiated the development and updating of standards in culturally competent nursing care. Standard 4 pertains to culturally competent practice, which is described as nurses using their cross-cultural knowledge and cultural sensitivity to implement culturally congruent care (Douglas et al., 2011). *Cultural competence* was defined by Schim and Doorenbos (2010) as "a behavioral construct consisting of actions in response to the demands of cultural diversity, awareness, and sensitivity" (p. 261). *Cultural diversity* refers to recognition of the cultural differences among people brought about not only by race and ethnicity, but also by age and gender, educational attainment, and socioeconomic status (Schim & Doorenbos, 2010). *Cultural awareness* pertains to appreciation of the similarities and differences among different cultures. It requires self-reflection to understand one's culture-based values and beliefs as they relate to other cultures. Meanwhile, *cultural sensitivity* refers to attitudes toward other cultures including willingness to learn about

and consider aspects of culture in the course of providing care. The development of cultural competence leads to culturally congruent care or care that fits the patient's needs in the cultural domains of health, caring, nutrition, education, personal space, communication, decision-making, spirituality, and values, beliefs, or customs (Schim & Doorenbos, 2010) as "a behavioral construct consisting of actions in response to the demands of cultural diversity, awareness, and sensitivity" (p. 261). *Cultural diversity* refers to recognition of the cultural differences among people brought about not only by race and ethnicity, but also by age and gender, educational attainment, and socioeconomic status (Schim & Doorenbos, 2010). *Cultural awareness* pertains to appreciation of the similarities and differences among different cultures. It requires self-reflection to understand one's culture-based values and beliefs as they relate to other cultures. Meanwhile, *cultural sensitivity* refers to attitudes toward other cultures including willingness to learn about and consider aspects of culture in the course of providing care. The development of *cultural competence* leads to culturally congruent care or care that fits the patient's needs in the cultural domains of health, caring, nutrition, education, personal space, communication, decision-making, spirituality, and values, beliefs, or customs (Schim & Doorenbos, 2010).

Specifically, the domain of education pertains to the type of, and value accorded to health education and the differences in perceptions when professionals provide education as compared to lay persons. The concept of cultural congruence was employed in the design of the educational intervention because it upholds the ethical principle of social justice that is a key to resolving health disparity. The TCSN standards promoting

cultural competence explicitly state the duty of nurses to promote social justice or people's right to equal access to health care (Douglas et al., 2011).

Pender's Health Promotion Model.

The model is based on the assumption that physiological, psychological, social, and cultural factors can hinder or promote individuals' initiation of behaviors that promote health emphasizing the role of situational influences (Pender, 2011). Moreover, Pender's model points to commitment being mediated by perceptions of the health benefits of, and barriers to enacting healthy behaviors. In addition, other demands competing with the behavior can make it difficult for individuals to enact the said behavior. However, modifying people's cognition, feelings regarding the behavior, and the physical and social environment can result in enactment (Pender, 2011).

Pender's health promotion model was chosen to frame this needs assessment project because it recognizes situational influences such as culture as a significant factor contributing to the difficulties initiating and maintaining healthy behaviors. The model also highlights the role of nurses in modifying individual cognition or promoting knowledge acquisition, and understanding in order to mediate commitment to adopting healthier behaviors. Commitment refers to an individual's intent to adopt a healthy behavior with plans on strategies he or she will implement to translate the intention into reality (Pender, 2011).

The cardiovascular health educational intervention investigated by this project

aims to foster commitment to diet management, physical activity, and compliance to treatment. Pender's theory outlines the importance of individual cognitive-perceptual factors. These factors are considered elements that play significant roles in influencing individual health-related behaviors (Pender, 2011). Therefore, application of Pender's theory in assessing the risk of CVD among African American women will be of great importance. The cognitive-perceptual factors, and their ability to influence an individual's health-related behaviors will promote healthy changes in lifestyle that are associated with decreasing occurrences of CVD.

Summary and Conclusion

Based on the limited studies available, conducting a needs assessment that illuminates risk factors for CVD is an effective in designing single-strategy or multifaceted interventions aimed at controlling and reducing risk among AA women. Areas of focus include diet, activity, lifestyle changes, decision-making, problem-solving, and maintaining healthier behaviors. Knowledge and skills help foster commitment to, and maintenance of risk reducing behaviors such as increasing physical activity, eating heart-healthy diet, and adhering to secondary prevention measures. Present interventions should consider how the physical activity, and dietary recommendations for adults can be adapted to the context of AA women's lifestyles. In addition, multifaceted interventions combining the promotion of both recommendations are warranted to help improve caloric balance. Physical activity or diet alone is ineffective as each complements the other. For this reason, an assessment aiming to understand risks that predispose the population to CVD risk is justified. Understanding behaviors of AA women is essential in the future

design of a curriculum that promotes use of cultural congruent education to create awareness of risk factors and better management skills. More studies are needed in investigating risk factors, and knowledge AA women acquire in the course of treatment, and how this affects their intention to make changes in lifestyle, and maintain healthier behaviors.

Section 3: Methodology Introduction

This needs assessment was designed to identify AA women's risk for CVD-related behaviors for health promotion and disease prevention at a community clinic. A needs assessment is the initial step in implementing an educational program to increase cardiovascular health in minority patients. It consists of chart reviews and data collection from existing patients at a community clinic. The review focused on diet, physical activity, weight and co morbid health issues such as hypertension and diabetes. Understanding the risk of AA women may help in ascertaining the range of topics needed to instill adequate awareness of risk and risk-reduction strategies. The clinic plans to use findings from the project to implement an education program to increase cardiovascular health in minority patients to whom they provide service.

Sampling

Charts of AA females were audited in order to identify consistent patterns and to allow for assessment variation in the represented population. The choice of the number of files for review was made to increase consistent patterns and to allow for assessment variation in the represented population. According to Machin, Campbell, Tan, and Tan (2011), choosing an appropriate sample size is important to avoid understudy and to ensure sufficient evidence to support research findings. Women with significant hearing and vision impairments, physical disabilities, and mental health disorders were excluded. Thus, convenience sampling was used. Charts of female AA patients between 21 and 64 years old were included for this review.

Setting

The setting of the needs assessment audit was a community health clinic located in the urban city of Houston, Texas. A certified family nurse practitioner who also held a DNP degree directed care at the clinic. The clinic saw patients across the age span, with most patients having diagnosis of diabetes. The clinic provided care to patients across the life span, however, the majority of patients were adults, most of whom had metabolic disorders and cardiovascular health issues. Approximately 900 to 1,200 patients were seen at the clinic annually.

Data Collection and Instrument

Approximately 300 charts of patients that meet inclusion criteria were pulled for review. Facility staff assisted in identifying and pulling charts that met inclusion criteria for review. I coordinated the review. I randomly selected charts and conducted the chart audit. I also created an original chart audit template for tracking of findings (see Appendix A).

Protection of Human Subjects

Approval from Walden IRB and the community clinic was received prior to starting the project. The IRB approval number for this study was 01-04-16-0169053. A community clinic representative was given information regarding the needs assessment and the reason for the needs assessment. There were no potential risks identified, however, potential benefits to the clinic included identification of patients at risk for CVD and behaviors to target in order to improve treatment outcomes. Confidentiality was maintained by the use of code numbers for each medical record. Only my preceptor, who

was also the director of the outpatient medical clinic, and I had access to the study materials. Codes were used to maintain confidentiality. Only the clinic director and I had access to the charts. Information from chart review will be destroyed 5 years after the audit. No contact was made with patients. However, the clinic administrators were apprised of plans to protect patient confidentiality. The rationale, purpose, and objectives of the research activity were shared with stakeholders at the clinic.

Data Analysis

Descriptive statistics were used to describe and summarize demographic data such as age and gender. Nominal and interval statistics were used to describe the data. Frequencies and percentages were used to describe the nominal-level data, and the mean was calculated as a measure of central tendency for interval data (age)**.** Descriptive statistics were used to describe the percentage of AA females who are at risk for CVD.

Project Evaluation Plan

Meetings with the clinic administrators and educators were conducted to discuss the outcomes of the needs assessments, and recommendations for educational programs were presented. The purpose was to determine whether current treatment modalities and educational materials required improvement for better patient care outcomes.

Summary

The needs assessment was conducted to determine the risk factors for CVD for AA females in a community clinic in an urban area of Houston, Texas. Descriptive statistics were used to determine outcomes of the chart review. The process evaluation examined ways in which the project design contributed to the outcomes and areas of

further research. The method for this research provides insight on behaviors and already-established treatment modalities that could contribute to improved patient outcomes.

Section 4: Findings, Discussion, and Implications

Introduction

A community health needs assessment is a major tool used by healthcare providers to evaluate the health needs of their community in order to advocate for and create better healthcare delivery. CVD is the leading cause of death in the United States, with ethnic minorities being disproportionately represented (Saab et al., 2014). A needs assessment identifying risk for developing CVD in AA women was conducted. This needs assessment was designed to assess risk for CVD of AA women receiving care at an inner-city clinic in Texas. The goal was to assess their level of risk factors related to lifestyle management with a focus on diet, exercise, family history of CAD, lab results, and compliance with treatment. The needs assessment was initiated as an initial step to determine patients' response to treatment and to developing a treatment model at the clinic that is tailored to AA women being seen at the clinic. Outcomes of the needs assessment could lead to the development of protocols to identify patients who are at risk for CAD and who could receive a more targeted approach to care to foster better treatment outcomes. This section provides explanations of findings and evaluation of the needs assessment. Implications for practice are discussed, along with implications for practice, limitations, strengths of the project, and recommendations made, including a summary of activities.

Findings and Evaluation of Findings

An audit of 70 charts of AA women, out of 300 possible, was conducted to identify CVD risk factors. The chart audit revealed that the women were between the

ages of 21 and 64 years, with a mean age of 24.9 years. Weight ranged from 104-225 lbs. (mean weight = 72.5 lbs.), and height ranged from 52-73 inches (mean height = 61.13 inches). (See Tables 1, 2, & 3).

Table 1

Descriptive Statistics for Age of Patients in Chart Audit

Age (years)	***N (%)***
Under 20	5(7.1)
21-30	9(1.2)
31-40	13(12.9)
41-50	16(22.86)
51-60	15(21.43)
61-70	11(15.7)
Above 70	1(1.43)

Table 2

Descriptive Statistics for Weight of Patients in Chart Audit

Weight (lbs.)	***N (%)***
Under 100	0
101-150	18(25.7)
151-200	29(41.4)
201-250	21(30.0)
Above 250	1(1.4)
Not seen	1(1.4)

Table 3

Descriptive Statistics for Height of Patients in Chart Audit

Height (ins.)	***N (%)***
Under 50	0
51-55	6(8.5)
56-60	19(27.1)
61-65	30(42.9)
66-70	12(17.1)
71-75	2(2.9)
Not seen	1(1.4)

BMI was calculated using a BMI calculator and was categorized as underweight, normal weight, overweight, and obese (CDC, 2015a). (see Table 4).

Table 4

Descriptive Statistics for the Distribution of Randomly Sampled Weight of Adult Females With CDC Weight Categories

No. of patients	**BMI (%)**	**Weight categories**
1	1.43	Underweight
8	11.42	Normal weight
23	32.86	Overweight
38	54.29	Obese
Total 70	**100%**	

The audit revealed that 66% of the women did not have CVD or any heart diseases, while 32% were already at risk and the status of the remaining 3% was unknown. Chart audits revealed that 7% reported not watching their diet, 60% reported that they were cautious about their diet, and 33% were indifferent about what they consumed; 67% of charts that were audited reported family history of CVD, while 33%

had no history of CVD and 3% indicated that individuals were unaware of history of CVD in their families (see Table 5)

Table 5

Descriptive Statistics of Patients in Chart Audit with Knowledge of CVD History

Categories	Yes	No	Unknown/indifferent
Family history	35(50.0%)	26(37.1%)	9(12.9%)
Physically active	24(34.3%)	10(14.3%)	14(20.0%)
Monitors diet	42(60.0%)	5(7.1%)	23(32.9%)
CVD diagnosis	**22(31.4%)**	**46(65.7%)**	**2(2.86%)**

Discussion of Findings

Addressing racial and ethnic disparities has become an emerging trend in the national debate about health care (Peek et al., 2012). Health disparities have been documented in chronic diseases, particularly CVD (Krousel-Wood, Reckelhoff, & Muntner, 2014). The underlying cause of this disparity has been associated with complex societal issues such as discrimination, institutional racism, poor access to health, and community resources, and socioeconomic status (Braveman & Gottlieb, 2014).

A strong link between the presence of CVD, and family history of CVD was evident in this chart review. Charts of AA women from families with CVD were also noted to be at risk of suffering from CVD irrespective of whether CVD was noted in either of their parents. AA women with a personal or family history of CVD should receive early and consistent screening for CVD to identify risk level and to promote early diagnosis and treatment for CVD. Early screening and diagnosis of CVD can help initiate lifestyle changes to reduce the likelihood of CVD onset, or to promote early treatment.

High levels of cholesterol noted in the charts audited showed that AA women, especially those 45 years of age and older, had a high risk of cardiovascular complications. Cholesterol associated with obesity is considered among leading causes of CVD across the board (Kei & Elisaf, 2015). Low socioeconomic status has been identified as a contributing factor to CVD in AAs due to consumption of diets high in fat and subsequently elevated cholesterol levels, thus increasing the likelihood for developing the disease (Addo et al., 2012).

The chart audit revealed that AA women engaged in very limited physical activity. Limited physical activity plays a significant role in CVD among AA females (Sallis, Floyd, Rodríguez, & Saelens, 2012). Lack of physical activity increases insulin resistance, leading to diabetes mellitus with resulting comorbidity of CVD at its chronic state (Newsom, Everett, Hinko, & Horowitz, 2013). Physical exercise aids in burning excess fat in the body, which could ensure maintenance of healthy weight.

Future research on this topic could involve health records from not only AA women, but also women from other ethnic backgrounds, such as Hispanic, Asian, and Native American women. Additionally, examining the charts of women from more economically diverse backgrounds could highlight the pathways through which being a woman, being poor, and being African American shape heart-healthy behavior.

Implications for Social Change

Health behaviors are multifaceted and are part of a larger social system of behaviors and social systems. The health promotion model recognizes lasting influences on health behaviors, indicating that they evolve from changes at different levels,

intrapersonal factors, interpersonal processes and groups, institutional factors, community factors, and public policy (Pender, 2011). Community-based interventions are designed to work by including culturally congruent changes in policy, community environments, and institutions. Changes in community policies and environments are particularly important in racial and ethnic minority communities due to the underlying etiologies of most cardiovascular disparities. Minority communities, in particular, have reduced access to heart-healthy foods (Halperin, 2013). Additionally, limited access to recreational resources can lead to inactive lifestyles that predispose AA women to higher incidence and prevalence of CVD.

Nonadherence to CVD treatments was another crucial concern identified through this chart audit. Furthermore, there was a noticeable gap in patient education conducted by the healthcare staff at the target clinic. The development of structured educational information that is consistently provided to AA women could improve the rate of compliance with CVD treatment protocols.

This needs assessment helped to identify the risk factors among AA women in regard to CVD. The assessment consisted of a chart audit of AA women and identified existing CVD risk factors. The results of this chart audit highlight risk factors for CVD present in AA women that could lead to the development of health care delivery models to effectively educate minority populations to promote optimal health outcomes.

Strengths, Limitations, and Recommendations

No contact was made with the patients during this research period, and data were de-identified, limiting the risk of violations of patient confidentiality and autonomy. The

clinic attends to a large population of underserved patients, which provided an adequate sample of charts for audit. Most of the patients who attend the clinic are either underinsured or uninsured, which may limit the generalizability of the findings to more economically, advantaged AA women. One of the limitations of this needs assessment was that not all CVD risk factors were considered; for instance smoking was not addressed. Smoking is an emergent health concern in the United States, and health care professionals have attributed the onset of CVD to smoking (Ji, Wang, & Li, 2013). The facility's recent transition to electronic-only charting made it difficult to access patient records more than 12 months old. Only records 12 or fewer months old were migrated into the new system. The sample size selected for this study was small, thus limiting the generalizability of the findings to the larger population of AA women.

Recommendations for future research on this group and issue should include a larger sample for greater diversity within the sample population. In addition, future research should attempt to solicit a larger and more diverse sample of AA women in order to fully understand the pathways through which being a woman, being poor, and being African American shape heart-healthy behavior. Additionally, the research should take into consideration other ethnic backgrounds in order to provide comparisons for researchers to make concrete conclusions about CVD.

Linking Results to Framework

According to Pender's health promotion model, personal attitudes toward health issues are influenced by situational factors such as cultural, psychological, physiological, and social circumstances (Pender, 2011). The model suggests that beyond these factors,

people make changes based on their personal perceptions of the risk of the health issue. Individual's commitment to make changes comes from their knowledge of risk factors and perceived barriers to addressing health-related threats in their lives. Health literacy and lack of skills in addressing the perceived barriers are primary factors that deter individuals from making needed changes to better their health. Pender (2011) stated that modifying one's perception and behavior, which includes understanding one's environment and personal cognition, will promote healthy behavior.

Pender's health promotion was chosen as a framework for this project due to its ability to recognize the role of culture and personal beliefs in an individual's perceptions of their health and in continued maintenance of such behaviors. Pender's health promotion model accentuates the role of nurses as health coaches and educators in health promotion. The nurse as an advocate provides guidance and support to individuals in their care to promote optimal health outcomes. However, individuals must commit to making changes themselves based on their level of understanding of their health issues and self-management skills (Pender, 2011). Minority populations globally have higher risk of morbidity and mortality related to CVD (Gersh, Sliwa, Mayosi, & Yusuf, 2010). Factors examined in this needs assessment such as hypertension, diabetes, weight and diet management, dyslipidemia, and low socio-economic status have been shown to predispose minority populations to CVD (Gersh, Sliwa, Mayosi, & Yusuf, 2010). Gaps in care in the management of CVD for African Americans and other minority populations result from decreased knowledge of their risks or lack of such knowledge (Gallant, Pettinger, Coyle, & Spokane, 2015). Nurses are in the center of efforts to promote

optimal health for patients through education. Studies such as this one provide insight into cultural beliefs, values, and ethnic practices, and thus may promote needed awareness in order to address disparities in AA and other minority populations effectively. The influx of cultures into the present-day United States calls for conscious effort by healthcare practitioners in creating culturally congruent strategies that will effectively address CVD and other chronic diseases to improve the health of African Americans and people of other cultures.

Analysis of Self

A culturally congruent, designed education is the key to effective engagement of patients (Hibbard & Greene, 2013). Tailoring education to meet the needs of the target audience is pivotal in effectively educating minority populations, in that it promotes optimal care outcomes (Chin, et al., 2012). The DNP-prepared nurse can use advanced education and skills in health promotion at all levels of care. I have grown as a leader and a scholar-practitioner from experience gained while in this DNP program. Obtaining advanced skills and perhaps expert critical thinking skills has helped me to gain new insights into the practice of nursing as well as prepared me as an advanced practice provider and mentor to other nurses. My goal is to be an advocate for patients and their families and caregivers. The setbacks and challenges of getting this degree have not diminished my interest in working with the underserved; rather, they have heightened my interest. As I continue to grow in this profession, I look forward to being part of growth in healthcare and to making the world a healthier place through research and education for both patients and healthcare practitioners alike.

Summary

Changes in lifestyle and lack of physical activity play major roles in the prevalence and incidence of CVD in the AA female population as well as among other populations within the United States. In efforts to promote healthy living, emphasis should be placed on initiating lifestyle changes that involve diet and activity. Diets high in saturated fats are major sources of cholesterol and should be avoided. Physical activity should be greatly encouraged in order to maintain a healthy weight. Findings from this chart audit, as discussed, support the emerging role of policy and community environmental changes as strategies to improve healthy behaviors in AA women as well as reduce disparities in health for this population. Epidemiological studies and randomized clinical trials provide compelling evidence that CVD is to a great extent preventable. In order to address CVD risk and CVD in AA women, much emphasis should be placed on lifestyle modifications that include eating in a heart-healthy manner (especially avoiding a high-fat diet), engaging in daily physical activity, and maintaining a healthy weight.

Section 5: Scholarly Product

Dissemination of research outcomes is important in promoting evidence-based practice and is vital in providing quality care to patients. Effective dissemination of projects aimed at promoting public health can lead to behavioral changes for patients, as well as practice changes that may lead to innovations in healthcare delivery. Disparities in healthcare create gaps that not only affect care outcomes of patients, but also lead to disparities that threaten patient safety. According to Turale (2011), these gaps could occur as a result of ineffective dissemination of research findings. Evidence-based research outcomes are ineffectual without sharing of findings. It is therefore important to understand one's audience and the best method to disseminate one's research. For this project, a PowerPoint is the planned method of dissemination to present outcomes to stakeholders.

Background, Purpose, and Nature of Project

Cardiovascular disease (CVD) is top on the list of leading causes of death in the United States (CDC, 2011), with statistics showing the disease as a primary cause of death among women 50 years and older (Williams, 2009). With high incidence of risk factors such as diabetes, hypertension, obesity, and overweight, African American (AA) women succumb to CVD more than Caucasian females (Williams, 2009). The rate of CVD is also greater among AA women than among White women, which contributes to the former's increased vulnerability. However, only 13% of AA were aware of the risk of developing CVD (Williams, 2009). Increasing awareness of risk factors through education and subsequent changes in lifestyle could effectively decrease the risk of CVD

and promote optimal health in AA women. Decreased awareness coupled low socioeconomic status and cultural behaviors predispose AA women to a higher risk of developing CVD and a resulting high rate of mortality (Brennen & Williams, 2013).

Purpose Statement and Project Objectives

The purpose of this needs assessment was to assess AA women's risk for CVD. AA women tend to have more risk factors than Caucasian females (Williams, 2009). AA women have a higher risk of CVD than Caucasian females, and they tend not to get treatment or know their risk factors. The results may guide the development of quality improvement and educational activities that will further develop interventions for minority disease management education.

Sample Size

Seventy charts of AA females 21 to 64 years of age receiving care at an inner-city community clinic were randomly selected and audited for this project.

Setting

The project setting was at a community clinic located in an inner city in Texas. The setting of the needs assessment audit was in a community health clinic located in the urban city of Houston, Texas. A certified family nurse practitioner who also held a DNP degree directed care at the clinic. The clinic provided care for mostly underserved patients across the age span. Approximately 900 to 1,200 patients were seen at the clinic annually, with the majority of the adult patients presenting with metabolic disorders and CVD.

Protection of Human Subjects

The needs assessment received approval from Walden University's Institutional Review Board prior to implementation (The IRB approval number for this study was 01-04-16-0169053). A data-use Agreement (Appendix B) and letter of cooperation (Appendix C) were obtained from the clinic. Full disclosure was provided to the administrators at the clinic.

Presentation of Results

On approval of the DNP project proposal, I elicited help from the clinic to identify 300 charts that met the inclusion criteria. Seventy charts were randomly selected and audited for the project. Privacy was maintained during the chart audits, which were conducted in a room available only to me the time of audits at the clinic. Results from the audit showed that that 66% of the women were not at risk of CVD while 32% showed risk of CVD. The remaining 3% did not know if they were at risk or not. Results from the chart audits showed that 7% disclosed that they did not monitor their diet, 67% monitored their dietary intake, and 33% could care less about their diet, of charts audited showed family history of CVD, while 33% indicated no history of CVD and 3% indicated lack of certainty regarding history of CVD in the family.

The audit was conducted using charts of women between the ages of 21 and 64 (mean age = 24.9 years). Weight ranged from 104-225 lbs. (mean weight = 172.5 lbs.), and height ranged from 52-73 inches (mean height = 61.13 inches). Body mass index (BMI) was calculated using an adult BMI calculator and was categorized as underweight, normal weight, overweight, and obese (CDC, 2015). Results showed that 1.4% of the

women were underweight, 11.4% showed normal BMI, 32.9% were overweight, and 54.3% fell under the obese category.

Study recommendations included establishing a patient education department with clear guidelines concerning areas that need to be addressed per patient outcomes. Additionally, follow-up calls were strongly recommended for patients perceived to be at risk within the first 7 days of the last date of service at the clinic. To further encourage compliance and adherence to treatment plans, discharge instructions should be written in language no more complex than fourth grade level to increase understanding. As much as possible, patients should be referred to community education services and other providers that might better meet the educational needs of the patients and their families. Because the clinic is located in an underserved area of the city, there was a recommendation for a health fair that would include local health departments such as Women, Infants and Children (WIC) and nutritionists to help educate patients on eating heart-healthy diets.

Implications for Social Change in Practice

Disparities in the care of minority populations pose a barrier to improving the health of AA women. Outcomes of the chart audit can be used to identify areas of need for AA women and why their risk of CVD higher than that of Caucasian women (Williams, 2009). The results can also be used to effectively address limited access to care or lack of care for AA women which can pose a threat to their health (Braveman et al., 2011). Ultimately, the project may draw attention to the importance of implementing culturally competent interventions that are tailored to meet the needs of the identified

population. Further, the results may be used to influence changes in public policies at both local and national levels for AA women and other minorities as well.

Evaluation

A PowerPoint presentation of the chart audit results was presented to the clinic administrators initially and later presented to clinic staff, with outcomes discussed. The clinic staff showed interest in adopting and implementing the recommendations from the chart audit. The DNP provider will be at the helm of the implementation of the project.

Conclusion

Inadequate knowledge of disease management by medical staff can undermine treatment outcomes for patients. In applying evidence from research into practice, nurses and other frontline clinical staff must be aware of the importance of conducting in-depth assessment in order to understand the individual needs of each patient in their care. This will not only provide needed knowledge to improve care outcomes for patients, but also influence changes in clinical practice that will hopefully give rise to innovations in patient care. Recommendations from this DNP project provide a platform to influence the quality of cardiovascular care delivered to patients at the community clinic as well as promote preventive health in general.

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Appendix A: Chart Audit Template

Audit #	Audit # Record #	Age	CVD DX (Y/N)	Family HX of CVD	HT (Inches)	WT	BMI	ACTIVE Y/N	Cholesterol Results	HgA1c	Monitors Diet(Y/N)

Appendix B - Data Use Agreement

DATA USE AGREEMENT

.

This Data Use Agreement for chart review, effective as of August 14, 2015, is entered into by and between Chikaodi Banor and Daystar Family Clinic. The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set ("LDS") for use in research **in accord with laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient's educational program.** In the case of a discrepancy among laws, the agreement shall follow whichever law is more strict.

Definitions. Due to the study's affiliation with Laureate, a USA-based company, unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the USA "HIPAA Regulations" and/or "FERPA Regulations" codified in the United States Code of Federal Regulations, as amended from time to time.

Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient's educational program.

Data Fields in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** In preparing the LDS, Data Provider shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: Patient charts/records deemed appropriate for the study. Areas of focus include, patients' age, weight, cholesterol labs results, height, weight and diet habits. Interest is also shown in including glycosylated hemoglobin A1c (HgA1c) as measure of glycemic control and risk of cardiovascular disease for patients with diabetes who also account for a large number of our patients.

Responsibilities of Data Recipient. Data Recipient agrees to:

Use or disclose the LDS only as permitted by this Agreement or as required by law;

Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

Not use the information in the LDS to identify or contact the individuals who are data subjects.

Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS **for its Research activities only.**

Term and Termination.

Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

Miscellaneous.

Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER	**DATA RECIPIENT**
Signed: Roseline Okoro, DNP, FNP-C	Signed:Chikaodi Banor, RN, MSN,CCM
Print Name: Roseline Okoro, DNP, FNP-C	Print Name: Chikaodi Banor, RN,MSN, CCM
Print Title: Clinic Director	Print Title: DNP Student.

Appendix C - Letter of Cooperation

Letter of Cooperation from a Research Partner

Roseline Okoro, DNP, FNP-C
Clinic Director
Daystar Family Clinic

August 14, 2015

Dear Chikaodi Banor,

Based on my review of your research proposal, I give permission for you to conduct the study entitled A Needs Assessment of African American Women's Risk for Cardiovascular Disease in a Community Clinic within the Daystar Family Clinic. As part of this study, I authorize you to conduct chart reviews for purposes of the research stated above.

We understand that our organization's responsibilities include: Assistance to identify charts meeting inclusive criteria for the proposed study, supervision as needed by the clinical director and any other support needed that may arise during the study to ensure successful completion of the project
We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,
Roseline Okoro, DNP, FNP-C
281-608-1392