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IDENTIFYING BARRIERS IN A MEDICALLY UNDERSERVED POPULATION

A DOCTORAL PROJECT

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DOCTOR OF NURSING PRACTICE

By

Gabriella Garza

Doctoral Project Committee Approval:

Deanna Jung DNP, APRN, AGACNP-BC, ACCNS-AG, Team Leader
Rachel McClanahan DNP, RN, NCSN, Team Member

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ABSTRACT

Health disparities have led to decreased access to comprehensive healthcare for medically underserved populations (MUP) who, according to the goals set forth by Healthy People 2020, should have equal access to healthcare. Individuals from MUP are defined as ethnic or racial individuals, in a specific geographical location, have a lower socioeconomic status, are underinsured, have increased no-show rates in primary care clinics, and suffer poorer health outcomes due to increased psychosocial barriers. Further investigation is needed to identify which barriers are affecting MUP and to determine if targeted case manager (CM) interventions to address barriers will improve patient appointment adherence rates.

The purpose of this Doctor of Nursing Practice project is to adapt and implement an evidence-based screening tool, the *Barriers to Health Questionnaire* (BHQ), to identify the most prevalent psychosocial barriers to medical appointment adherence and to develop targeted interventions aimed to improve resources and services available in MUPs. This project utilized a convenience sample of current clinic patients to explore barriers in MUP. The BHQ was administered and data collected for 14 days. Descriptive statistics were used to determine the most prominent barriers affecting MUP. A chi-square analysis examined if CM intervention was successful in improving patient adherence to the next scheduled appointment. IRB approval was obtained through California State University, Fullerton. Of the 328 participants, 164 patients were referred to a CM. Approximately, 96% of patients referred to a CM had their psychosocial barrier

addressed. A chi-square analysis revealed significantly ($p=.007$) higher attendance at the next scheduled appointment for patients referred to a CM compared to patients not referred to a CM. Hispanic, Latino women were the more prominent demographics in the project clinic (96%), supporting the existence of gender and racial disparities within MUPs. A lack of insurance (76%) and health care costs such as copays, medication, or treatment costs too high (71%) were the most prevalent barriers to appointment adherence affecting MUP. A patient's perceived knowledge about insurance coverage requires further investigation, considering a majority of patients have Medicaid. Results support how pivotal providers and CMs can be in screening for barriers and improving appointment adherence and healthcare access.

The BHQ is an effective evidence-based screening tool which can be used to identify barriers that negatively impact patient appointment adherence and health outcomes in MUPs. Further research to determine the efficacy of these tools should be ongoing in an effort to alleviate healthcare disparities in MUP. Additionally, continuous research must ensue to define how CMs are central interventionists that can promote improved health outcomes and appointment adherence in a population at-risk of dying from chronic disease due to a lack of healthcare access.

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BACKGROUND

Health disparities have led to decreased access to comprehensive healthcare for medically underserved populations (MUP) who, according to the goals set forth by Healthy People 2020, should have equal access to healthcare (U.S. Department of Health and Human Services [HHS], 2016). Patients within MUP are defined as individuals in a specific geographical location where primary care providers are lacking, identify as an ethnic or racial minority, have lower socioeconomic status (SES), are underinsured, and experience increased psychosocial barriers such as lack of access to healthy foods, reliable transportation, safe housing, or culturally sensitive providers (Health Resources & Services Administration, 2016; HHS, 2016; Toscos, Carpenter, Flanagan, Kunjan, & Doebbeling, 2018). Consequently, patients within MUP lack regular access to healthcare, suffer poorer health outcomes, and experience increased mortality due to insufficient preventative cancer screenings. Additionally, chronic, uncontrolled medical conditions such as diabetes mellitus (DM), coronary heart disease (CHD), and depression are higher among MUP compared to non-MUP patients (Dickman et al., 2017; Toscos et al., 2018).

Patients from MUP tend to have higher no-show attendance rates due to a lower SES, age, gender, clinic booking style, rapport with a provider or clinic staff, or the complexities of health and psychosocial needs (Ellis, McQueenie, McConnachie, Wilson, & Williamson, 2017). No-show attendance refers to patients who miss scheduled appointments without a cancellation notice or an attempt to reschedule (Hwang et al., 2015). A standardized no-show rate for primary care clinics cannot be calculated due to varying clinic size and population, however, within North America, the average primary care clinic no-show rate is 23% (Kheirkhah et al., 2016). As it is not clear which

psychosocial barriers most effect appointment adherence in MUP, further investigation is needed to better understand healthcare barriers in the MUP and develop interventions to target these barriers to provide quality care in the outpatient primary care setting.

A secondary effect of high patient no-show rates on clinic operations include decreased insurance and federal reimbursement, which negatively influences the fiscal success of a clinic. With each no-show, clinics experience an average loss of about \$196, leading to an annual loss of as much as \$14.65 million, depending on the size of the clinic (Kheirkhah et al., 2016). Outpatient primary care clinics can experience an annual revenue deficit of between 3% and 14% (Kheirkhah et al., 2016). Budget deficits from appointment non-adherence compromise staffing and the associated costs needed to keep the clinic functioning (Kheirkhah et al., 2016).

Clinics attempt to bridge healthcare gaps to ensure patients from MUP attend their scheduled appointments by implementing interventions such as automated telephone calls, mailed letters, overbooking, scheduling multiple patients for one time slot, or imposing fees and text messaging notifications to remind patients about their appointments (Dantas, Fleck, Cyrino Oliveira, & Hamacher, 2018; Kheirkhah, Feng, Travis, Tavakoli-Tabasi, & Sharafkhaneh, 2016). Imposing a letter delivery and an automated telephone reminder system showed a decrease in no-show rates from about 23.5% to 16.96% and 15.2%, respectively, however, little is known if imposing fees on an MUP is beneficial (Kheirkhah et al., 2016).

Federally qualified health centers (FQHC) have tried to meet the healthcare demand of MUP by recruiting primary care providers to improve healthcare standards and prevent disease (Smith, Wallace, O'Dowd, & Fortin, 2016). Even with the existence of

FQHC, vulnerable populations incur increased health risks with narrowed access to healthcare and shortages in providers (Scarborough et al., 2016). Clinics require continual recruitment of culturally competent providers who have an interest in improving health outcomes and identifying psychosocial barriers affecting MUP, in addition to encouraging patients to keep routine follow-up appointments (Smith et al., 2016).

Problem Statement

A review of the current appointment process at the project clinic showed gaps that impede a secure workflow. First, appointment scheduling was manual and completed by more than one front office staff member, resulting in varying scheduling methods. Secondly, reminder phone calls were made seven and three days prior to an appointment, allowing several days between reminder call and appointment time. Third, high no-show patients were not called the day before or the day of an appointment. Fourth, there was no specific appointment scheduling process in place for patients with more than five no-show appointments. Fifth, all patients received similar manual reminder phone calls regardless of whether they were identified as a no-show risk.

On average, outpatient primary care clinics can have as low as a 6% to as high as an 80% no-show rate and, as a result, are burdened by fluctuations in resource planning, gaps in delivery of patient care, and fiscal losses (Kheirkhah et al., 2016; Shah et al., 2016). Currently, a 26% to 41% no-show rate exists at the project clinic in San Pedro, California, which is identified as FQHC. There is a need to reduce the clinic no-show rate and to identify those barriers which impede healthcare access in MUP and hinder patient health-promoting behavior, adherence, and health outcomes.

Purpose Statement

The purpose of this Doctor of Nursing Practice project is to adapt and implement a screening tool to identify the most prevalent psychosocial barriers to appointment adherence in an effort to decrease no-show rates and develop targeted interventions aimed to improve resources and services available in an MUP.

Theoretical Framework

This project will utilize the theoretical framework of Nola Pender's Health Promotion Model (HPM; Figure 1). A framework provides the foundation for the interpretation of findings and how these findings will be integrated into patient care. The use of the HPM will help identify the barriers that influence health behaviors such as missing appointments.

Based on Pender's HPM, key health determinants influence people's health behaviors (Pender, Murdaugh, & Parsons, 2011). The HPM encourages the improvement of health behaviors through five concepts that have continuous reciprocal influence in maintaining the goal of promoting an individual's health: person, environment, nursing, health, and illness. (Pender et al., 2011). The first construct, person, considers an individual to be a biophysical organism shaped by the environment who works to thrive in an environment (Pender et al., 2011). The second construct, environment, includes the physical, cultural, and social aspects of an individual's life (Pender et al., 2011). The third construct of the HPM, nursing, refers to the collaboration between nurses and healthcare providers acting as healthcare facilitators to encourage health-promoting behaviors for an individual or their family (Pender et al., 2011). The fourth concept, health, is defined as an individual reaching their actualization of human potential through

self-care practices, goal-directed behavior, and relationships or cues with other individuals or their environment (Pender et al., 2011). The last concept, illness, refer to distinct events in an individual's life which can promote health behaviors or hinder an individual's health promotion (Pender et al., 2011). Additionally, it should be noted that all five concepts have continuous reciprocal influence in maintaining the goal of promoting an individual's health (Pender et al., 2011). The HPM is based on several assumptions which postulate that individuals will create a life that is expressive of their distinct human potential by engaging in certain health behaviors based on their personal values (Pender et al., 2011). Individuals will seek to actively control their health behavior and transform throughout their lifespan in an effort to find balance as a person through interaction with the environment and influence from healthcare providers (Pender et al., 2011). As a result, the individual is a dynamic being who can absorb and exert behavior change as needed to maintain balance (Pender et al., 2011).

In addition to the concepts and assumptions, the HPM presents numerous theoretical suggestions for the promotion of healthy behaviors (Pender et al., 2011). Health behavior is influenced by an individual's beliefs about the benefit of a specific health behavior (Pender et al., 2011). Health behaviors are influenced by barriers within an individual's environment. Interpersonal influences, like friends, family, or healthcare providers cue the individual to promote self-efficacy, but, if these influences are removed or enhanced, or if competing demands exist, an individual will be prevented from engaging in health-promoting behaviors (Pender et al., 2011). Lastly, an individual must be committed to change their behavior but is more willing if incentivized (Pender et al., 2011).

The initial construct of the HPM, person, refers broadly to all project clinic patients. How patients interact with their environment can be functional, meaning they can cope and engage in health-promoting behaviors like appointment adherence, medication compliance, and self-care behaviors (Pender et al., 2011). Patients are shaped by their community and will learn both health-promoting and health-destructive behaviors at the same time (Pender et al., 2011).

An individual's environment refers to psychosocial and physical barriers such as low SES, lack of access to healthcare resources, substance abuse, mental illness, unemployment, homelessness, difficulty obtaining transportation, food and water scarcity, and safety within the community. Barriers can create an imbalance within the individual and impair their role-function and health-promoting behaviors (Pender et al., 2011). Individuals from MUP have difficulty maintaining health and health-promoting behaviors due to the inability to meet basic human needs and as a result, they have worse health outcomes (Pender et al., 2011).

The HPM is a theoretical framework where the primary role of nursing practice is disease prevention (Pender et al., 2011). Nurses and healthcare providers collaboration with patients is pivotal in patients' achieving wellness and health optimization (Pender et al., 2011). Healthcare providers can approach patient care with compassion and an understanding that psychosocial inequalities may hinder and interrupt a patient's access to healthcare and motivation to adopt health-promoting behavior (Pender et al., 2011). Health care providers must be aware of barriers that will affect an individual's entire biophysical being within the medically underserved environment (Pender et al., 2011).

Attention is best focused on the identification and management of barriers to health-promoting behaviors to decrease no-show rates.

An individual's capability to evolve and maintain health-promoting behaviors is disrupted by competing needs for basic survival, such as food and shelter (Pender et al., 2011). As such, maintaining healthcare relationships and appointment adherence is more challenging (Pender et al., 2011). Individuals among MUP may have difficulty committing to health-promoting behaviors because the environment in which they live, threatens their integrity as a healthy, functioning individual (Pender et al., 2011).

The last construct of the HPM, illness, is closely tied to a person's health. Barriers within MUP affect how an individual maintains wellness given the scarcity of resources and increased risk of ill-health. Individuals among MUP often do not receive pertinent health screenings or maintain healthcare follow-up due to perceived barriers or personal capability (Pender et al., 2011). As a result, these patients suffer higher rates of DM, CHD, or mental illness. Health care providers are integral in promoting health and the self-actualization of a patient (Pender et al., 2011).

Targeting a high no-show rate through the adaptation and implementation of a screening tool will comprehensively identify psychosocial barriers, in hopes that those barriers can be addressed, in an effort to encourage patient appointment attendance.

Individual Characteristics Behavior Specific Cognition Behavioral Outcome

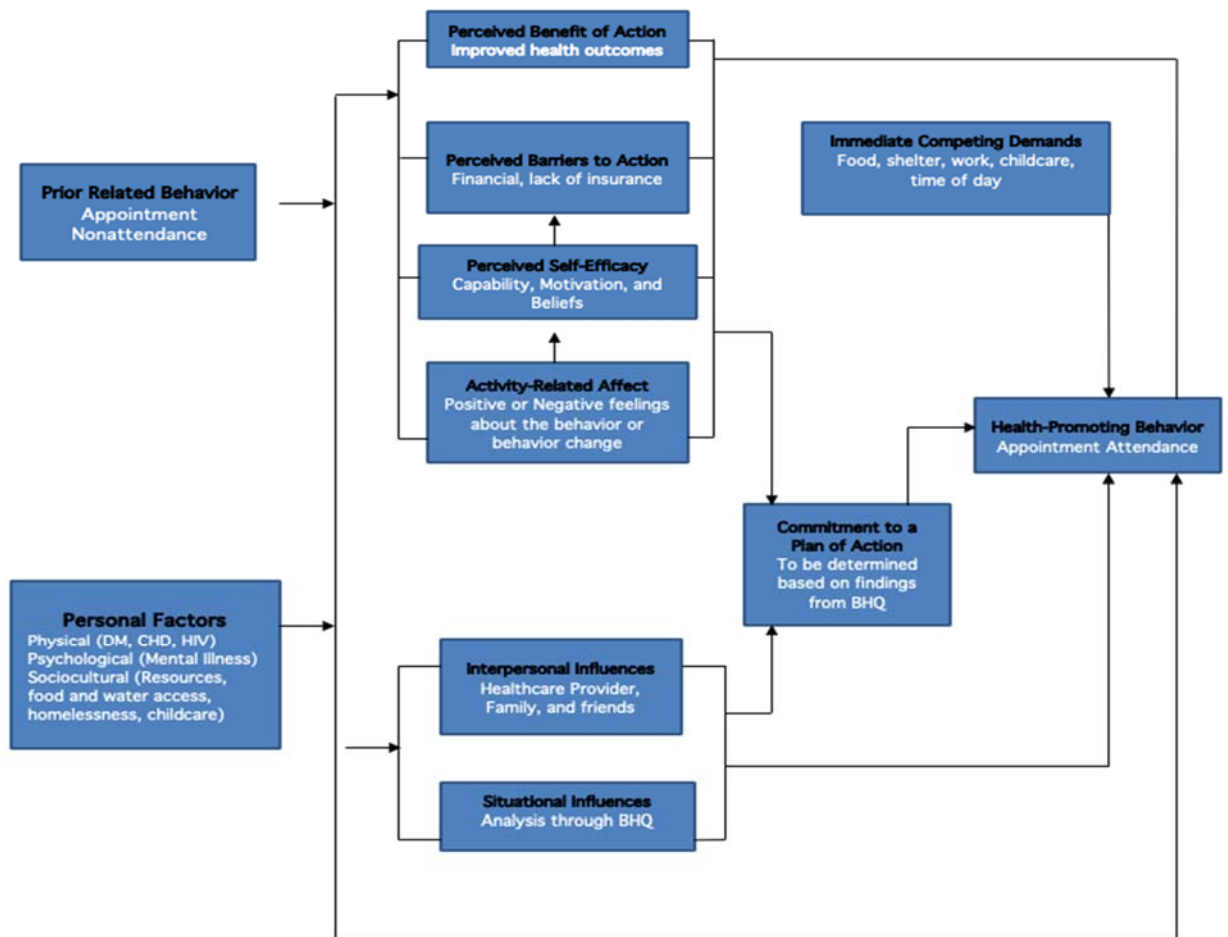


Figure 1. Pender's health promotion model: Identifying psychosocial barriers to address no-show rates among an MUP.

SYNTHESIS OF LITERATURE

To further explore the concepts regarding MUP in this project, a literature search of the scholarly computerized databases CINAHL, The Cochrane Systematic Reviewer Database, EBSCO, Google Scholar, ProQuest, PubMed, and Wiley Online was conducted. Search terms and phrases were at-risk populations, underserved populations, medically underserved, medically underserved areas, medically underserved population, vulnerable populations, health-risks of at-risk populations, health outcomes of low-income patients, nurse practitioner assessment of at-risk populations, no-show, no-show appointment rate, improving no-show rate, appointment reminder, appointment cancellation, appointment scheduling missed appointment, outpatient primary care clinic, barriers to care, mental health barriers to care, mental health needs in underserved populations, barriers to healthcare, psychosocial barriers to care, psychosocial barriers to care in low-income populations, socioeconomic status and health care, care coordination, case management, case manager, interventions to improve patient compliance, interventions to improve patient appointment compliance, FQHC, and low-income clinics.

Inclusion criteria for the selected articles were English language, peer-reviewed, systematic reviews, quantitative research articles, randomized control trials, retrospective cohort studies, and qualitative research articles. Selected publication dates ranged from 2014 to 2019 to ensure this project captured all recent published information. Material published prior to 2014 was selectively included to demonstrate the correlation between past and present practices. The selected articles were then categorized into four groups based on the interest of study: (a) medically underserved populations, (b) psychosocial

barriers to healthcare and attendance, (c) no-show trends in MUP, and (d) evidenced-based approaches to improve health outcomes in MUP.

Medically Underserved Populations

An examination of the current literature demonstrates that MUP are complex geographical systems in which SES, race, ethnicity, and insurance status act as barriers to healthcare access and increase disparities in health-promoting behaviors (HRSA, 2016; Wong, 2015). Toscos et al. (2018) defined access to health within MUP as utilization of personal health services in an effort to achieve positive health outcomes. A closer examination of how socioeconomic status influences barriers affecting MUP is widely needed (Toscos et al., 2018).

Socioeconomic Status, Education, Healthcare Costs, and Insurance Coverage

The consequences of inequalities in income inhibit individuals among MUP to afford the health insurance or the costs associated with healthcare. Socioeconomic status and the level of education an individual achieves are correlated with poorer healthcare accessibility and outcomes.

Within MUP, African American and Hispanic groups disproportionately fall within lower income brackets and have lower levels of education when compared to Whites, with 23.9% of African Americans, 20.2% of Hispanics, and 9.9% of Whites living below the poverty level (Cruz et al., 2018; Pollack et al., 2013; Toscos et al., 2018). White groups are wealthier than racial and ethnic minorities with an average income of \$58,270, compared to Hispanics and African Americans with an average income of \$40,963 and \$34,598, respectively (Economic Policy Institute, 2017; Williams, Priest, & Anderson, 2016). The gap in wealth is more prevalent in minority groups in so

much as the value of wealth of one dollar within White Groups, is only valued at seven cents in Hispanic groups and six cents in African Americans, (Williams et al., 2016). Thus, SES and a higher level of income provides greater access to healthcare resources, while a lower SES becomes a barrier to healthcare access and ultimately poorer health outcomes (Cruz et al., 2018; Pollack et al., 2013; Toscos et al., 2018; William et al., 2016). The community of San Pedro where the project clinic located, is defined as a population from a lower SES as it has a median income of \$44,348 which is below the national average (Data-USA, 2018).

Individuals with a lower level of education have less access to healthcare and resources. White individuals who had at least two years of college education were correlated with having health insurance and access to healthcare clinics (Pollack et al., 2013; Toscos et al., 2018). Williams and colleagues (2016) found that 17.8% of African Americans and 13.8% of Hispanics were college graduates, in comparison to 31% of Whites. An individual without a college education was more likely to be underinsured and have limited access to healthcare clinics (Toscos et al., 2018; Williams et al., 2016). Within San Pedro, 40.7% of the population had less than a high school education, further illustrating the gap in education and healthcare access (City-Data, 2019).

Chronic diseases are a public concern for individuals among lower SES populations as unmet healthcare needs and healthcare inaccessibility are commonly found in minority, unmarried, and low-income households (Orentlicher, Wilson, Shepard, & Sade, 2018; Tumin et al., 2018; Yamada, Chen, Naddeo, & Harris, 2015; Meluch & Oglesby, 2015). Barriers to healthcare include high insurance premiums, high insurance deductibles, and inflated out-of-pocket costs (Tumin et al., 2018). Since 2012, out-of-

pocket healthcare expenses have increased by approximately 4.1% within the United States (Meluch & Oglesby, 2015).

United States healthcare policies have yet to find a long-term solution to the inequitable healthcare access that burdens low SES groups (Yamada et al., 2015). One approach developed to target MUP and close the disproportionate gap in health outcomes and appointment nonadherence was the implementation of FQHC. Despite the availability of FQHC, individuals among MUP continue to underutilize these facilities due to a lack of insurance or resources for healthcare (Anderson et al., 2015; Jia et al., 2014; Kontos, Emmons, Puleo, & Viswanath, 2011; Toscos et al., 2018).

Additionally, in response to high rates of underinsured minority groups, the Affordable Care Act (ACA) was implemented to increase access to healthcare among MUP, however, two-thirds of minorities continue to lack health insurance (Batterham et al., 2016; Douthit et al., 2015). Despite state-sponsored insurance like the ACA, low-income patients simply cannot afford healthcare costs and will often choose to forgo out-of-pocket medical treatments such as prescribed medications, outpatient therapies, or referrals to specialists (Meluch & Oglesby, 2015). Often, rather than seeking healthcare treatment from a medical professional, minority populations look to friends and family for healthcare advice due to healthcare costs or a lack of insurance coverage (Kontos et al., 2011; Toscos et al., 2018). Among patients who seek medical treatment, 80% of underinsured patients are still unable to afford the high costs of healthcare services and/or treatment and are four times more likely to no-show for an appointment (Dantas et al., 2018; Hwang et al., 2015; Mehra et al., 2018; Mohammadi et al., 2018). In the San Pedro community, 51% of the population identifies as being underinsured or on a state

Medicaid program (Data-USA, 2018). The project clinic utilizes an in-house enrollment specialist to assist in screening and enrolling all qualified patients into the Medicaid program.

Healthcare providers are not traditionally responsible of communicating healthcare-associated costs with patients, but within a complex MUP, it is recommended that providers acknowledge the role that low SES has on adherence to healthcare access and chronic disease, and work to further identify barriers within this population (Dickman et al., 2017; Meluch & Oglesby, 2015; Williams et al., 2016; Toscos et al., 2018).

Chronic Diseases

Lower SES affects an individual's healthcare access by inhibiting the ability of a patient to afford healthcare costs and the necessary preventative screening and follow up care (Toscos et al., 2018). Decreased healthcare access or utilization will lead to chronic disease such as diabetes mellitus (DM) and coronary heart disease (CHD; Dickman, Himmelstein, & Woolhandler, 2017). Patients with chronic disease incur increased healthcare costs for services, treatment, and medications but patients within MUP struggle with the affordability and accessibility of healthcare services (Dickman, Himmelstein, & Woolhandler, 2017; Toscos et al., 2018).

Jack, Jack, and Hayes (2012) found that 12.6% of African Americans and 11.8% of Hispanics had a significantly higher prevalence of diabetes when compared to 7.1% of White counterparts. Possible explanations for this disproportionate gap in diabetes prevalence is related to low SES and an inability for individuals to afford access healthcare costs as well as an improper diet due to limited quality food sources (Jack et

al., 2012). Diabetics who are uninsured will spend approximately \$1,446 annually in out-of-pocket diabetes treatment and services even though income is limited (Dickman et al., 2017). As a result, further insight into the growing inequalities and barriers of MUP is needed to improve health outcomes of an MUP.

Coronary heart disease has similar prevalence rates in Hispanic, African American, and White populations at 6.7%, 7.2%, and 7.8%, respectively, though, access to treatment is limited among Hispanics and African Americans (Leigh, Alvarez, & Rodriguez, 2016). Within a cohort study of patients over forty-five years of age, 90% of eligible minority patients eligible to be treated for CHD did not receive the proper treatment were more likely to die (Leigh et al., 2016). Additionally, Dickman and colleagues (2017) found that 38% of patients with cardiac disease who suffered an acute myocardial infarction had a low SES and were underinsured, showing how health inequalities cause barriers within MUP.

Chronic disease management is imperative in all populations, however, within MUP, health disparities for chronic disease management such as DM and CHD, are fueled by racial and SES inequalities (Dickman et al., 2017). Primary care can provide the necessary prevention tools and care to improve the health status of MUP, but without adequate resources, barriers will continue to inhibit appointment attendance and act as strong predictors to poorer health outcomes (Dickman et al., 2017; Toscos et al., 2018; Jack et al., 2012).

Psychosocial Barriers to Healthcare and Attendance

Socioeconomic influences and psychosocial barriers can impact a patient's overall wellness (Kim, Vonneilich, Lüdecke, & Von Dem Knesebeck, 2017; Neuert, 2017).

Understanding how barriers affect healthcare access to among the MUP will provide insight into how providers can better address barriers. Psychosocial barriers are defined as any exposure or factor which has the ability to negatively influence the thoughts and behaviors of a person (Kim, et al., 2017; Neuert, 2017). Linguistic barriers, transportation to healthcare services, SES and the affordability of healthcare services, food insecurity, employment status, and mental illness and homelessness all influence a patient's well-being (Kim et al., 2017; Neuert, 2017).

Linguistic Barriers

Within MUP, linguistic barriers among minority groups impact healthcare beliefs and behaviors, leading to inequitable healthcare for vulnerable populations (Betancourt et al., 2016; Meuter et al., 2015). Providers have an obligation to deliver quality care to patients regardless of a patient's racial and ethnic diversity, but linguistic barriers create poorer health outcomes when important health information is not correctly conveyed (Betancourt et al., 2016; Meuter et al., 2015). When a patient speaks a second language that is not known by a provider, the provider must rely on a trained translator (Betancourt et al., 2016; Meuter et al., 2015). However, if a translator is not available, the provider relies on non-medical staff, medical assistants, or a patient's family member to translate the information (Betancourt et al., 2016; Meuter et al., 2015). Similarly, patients will rely on family members or non-medical clinical staff to convey health information to the provider (Betancourt et al., 2016; Meuter et al., 2015). As such, patients' symptoms are sometimes not correctly conveyed to providers, and providers cannot adequately communicate risk factors for diseases, comprehensively discuss a diagnosis, or explain pertinent disease education to the patient (Betancourt et al., 2016; Meuter et al., 2015).

Consequently, patients feel increased stress and anxiety about not being understood and will often have poor appointment attendance (Betancourt et al., 2016; Meuter et al., 2015). Providers on the other hand may incorrectly treat or make errors in decision-making (Betancourt et al., 2016; Meuter et al., 2015). In an effort to improve communication within MUP and improve health outcomes, providers must understand that linguistic barriers affect communication and should therefore have trained translators readily available to translate communication between provider and patient (Betancourt et al., 2016; Meuter et al., 2015).

Transportation

Transportation is a basic non-medical need for individuals to manage chronic disease (Fraze, Lewis, Rodriguez, & Fisher, 2016; Syed, Gerber, & Sharp, 2013). A lack of transportation is considered a barrier to health which leads to decreased access to medication and medical treatment, and an increase in missed appointments and delayed care within MUP (Fraze, Lewis, Rodriguez, & Fisher, 2016; Syed, Gerber, & Sharp, 2013). Without adequate transportation and access to comprehensive healthcare, patients endure poorer health outcomes (Fraze, Lewis, Rodriguez, & Fisher, 2016; Syed, Gerber, & Sharp, 2013). In a systematic review completed by Syed, Gerber, and Sharp (2013), 25% to 67% of patients who miss their scheduled outpatient clinic appointments lack transportation and are from low SES, while 82% of patients who keep their appointment have access to a car or a form of transportation (Fraze, Lewis, Rodriguez, & Fisher, 2016; Syed, Gerber, & Sharp, 2013). Furthermore, 50% of diabetic patients who were admitted to a hospital with diabetic ketoacidosis cited transportation as a barrier to accessing their medicine (Syed, Gerber, & Sharp, 2013).

Food Insecurity

Access to proper care begins with access to nutritious foods, water, and healthcare clinics (Toscos et al., 2018; Jack et al., 2012). According to the United Nations Subcommittee, food insecurity refers to an individual being limited in access or availability to nutritious, safe foods (Decker & Flynn, 2018). Within the United States, the prevalence of food insecurity affects 15.8 million people in which individuals may go days without eating and undergo increased incidences of chronic disease and psychological distress (Decker & Flynn, 2018).

Food insecurity is caused by several factors such as a lack of financial resources, unemployment status, and a lack of access to government sponsored food assistance programs (Decker & Flynn, 2018; Jack et al., 2012). Decker & Flynn (2018) found that those who do not have reliable access to food suffer from chronic health conditions such as DM and CHD and will spend roughly \$1,800 dollars more of medical costs than individuals who are not food insecure. Within MUP, individuals have difficulty accessing quality meats, fruits, and vegetables due a lack of resources as well as a lack of transportation to quality supermarkets (Decker & Flynn, 2018; Jack et al., 2012). Hispanics and African Americans only have access to 41% of quality chain supermarkets when compared to Whites. Hispanics and African Americans must rely on small markets and convenience stores to meet their food needs (Jack et al., 2012). As a result, individuals who have food insecurity often purchase cheaper, processed foods high in carbohydrates, which contributes to negative health outcomes related to poor eating habits such as heart disease, diabetes, and stroke (Decker & Flynn, 2018; Jack et al., 2012; Toscos et al., 2018).

Food insecurity creates further disproportionate gaps in healthcare for individuals in MUP. Providers can attempt to improve health outcomes by screening patients for food insecurity, then utilizing care coordination or social work to refer patients to food banks or government food programs like the Supplemental Nutrition Assistance Program (Decker & Flynn, 2018).

Childcare

Appointment adherence is affected by an individual's lack of childcare. Single parents, particularly mothers, attribute missed appointments to inadequate childcare support or a lack of resources to pay for childcare (Ballantyne & Rosenbaum, 2017; Taber, Leyva, & Persoskie, 2015). Individuals reported that the decision to attend an appointment was based on childcare availability and other responsibilities in the home (Ballantyne & Rosenbaum, 2017). Individuals who reported a lack of childcare were from lower SES, likely to be on public assistance, and had less social support (Ballantyne & Rosenbaum, 2017). Taber, Leyva, and Persoskie (2015) analyzed national data to gain a better understanding of missed appointments at the national level and found that out of 1,369 patients, 58.4% of patients cited barriers to appointment adherence, of which, a lack of childcare was included. Although childcare is cited as a barrier to healthcare, the literature review was unable to produce information about how the lack of childcare affected the health status of individuals among MUP. Further exploration into the prevalence of childcare in MUP is needed and is best addressed by screening for childcare barriers to appointment adherence.

Employment Status

An individual's health and well-being are closely connected with employment status (Buffell, Beckfield, & Bracke, 2017). There are many causes of unemployment, such as changes to the economy, or the inability of an individual to keep employment due to illness or family crisis (Buffell, Beckfield, & Bracke, 2017). Additional factors which influence employment status include low SES, level of education, or mental illness (Buffell, Beckfield, & Bracke, 2017, Lee et al., 2015). After the United States recession of 2007, the unemployment rate for young adults with low SES has almost doubled to 17.2% (Lee et al., 2015). With unemployment comes a lack of stable income, less affordability of food or healthcare expenses and an increased risk for substance abuse and homelessness (Burke et al., 2013; Lee et al., 2015). For individuals who do find employment, jobs are often short-term, low-skilled, and without health benefits or a fair wage (Burke et al., 2013). Consequently, individuals from low SES have increased health disparities and poor health outcomes from the lack of stable employment (Buffell, Beckfield, & Bracke, 2017; Burke et al., 2013, Lee et al., 2015).

Mental Illness and Homelessness

Homelessness affects an individual's access to health care services and further leads to a disruption in primary care follow up and overutilization of emergency department services, increased health disparities, chronic disease, untreated mental health disorders, and social deprivation (Medcalf & Russell, 2014; Narendorf, 2017; Watson, Crawley, & Kane, 2016; Weinstein et al., 2013). Homelessness is defined as a person who does not have stable housing, who sleeps in the streets, squats near businesses, or has temporary sleeping accommodations at a friend's home or within a community

shelter (Medcalf & Russell, 2014). Causes of homelessness vary and include a lack of resources, social support, a past psychological trauma, substance abuse, and prevalence of mental illness (Medcalf & Russell, 2014; Narendorf, 2017).

Homeless individuals experience poorer health outcomes and increased mortality (Medcalf & Russell, 2014; Narendorf, 2017; Watson, Crawley, & Kane, 2016). It is estimated that homeless men will have a premature death between 40 to 47 years of age from preventable health conditions, but due to a lack of stable housing, medical care, rehabilitation, or behavioral therapy, homeless individuals do not seek healthcare from a primary care provider and will utilize emergency departments for acute health needs (Medcalf & Russell, 2014; Weinstein et al., 2013). For example, during an acute illness, homeless individuals were five times more than non-homeless individuals to underutilize outpatient primary care and seek medical care and services from emergency departments (Medcalf & Russell, 2014; Narendorf, 2017; Weinstein et al., 2013). Narendorf (2017) found that 61% of homeless individuals use emergency department services in lieu of outpatient care clinics due to the high costs of healthcare services, prolonged wait times to be seen by a provider, or fear of discrimination. For example, approximately 79% of homeless individuals have untreated chronic diseases and mental illnesses but are reluctant to seek care due to previous negative experiences like judgement or discrimination from healthcare employees and providers, or fellow patients in the healthcare setting (Weinstein et al., 2013; Narendorf, 2017).

Mental illness is prevalent in the homeless population. According to the 2016 Annual Homeless Assessment Report, there are over 30,000 homeless individuals within the United States of which 50% identify as having a behavioral disorder, 20% are

diagnosed with major depression or mania; yet only 32% of homeless individuals with a mental illness receive mental health treatment (Narendorf, 2017). Additionally, in a mixed methods study by Narendorf (2017) a correlation between young adults with mental illness and homelessness was found where 50% of 54 adults in a mental health hospital reported homelessness. In addition to an underlying mental illness, homeless individuals face increased psychological stress and anxiety because their living conditions are often overcrowded, unsafe, lack basic needs, and only temporary (Medcalf & Russell, 2014). Homelessness and mental illness increases feelings of isolation and individuals report fewer coping skills and feel socially deprived by the fear of social stigma and discrimination (Narendorf, 2017).

While a standardized plan or feasible options to correct the housing and mental health crisis which affects homeless populations currently do not exist, it is imperative that psychosocial deterrents to health be identified as MUP have increased rates of barriers to healthcare (Toscos et al., 2018; Williams et al., 2016). Additionally, it is also important to become familiar with the types of barriers of homeless individuals and no-show trends within MUP to further increase efforts to decrease patient adherence rates and increase patient health outcomes.

No-Show Trends in MUP

Although it is understood that unique factors affect the MUP, research is inconclusive and cannot fully explain or identify which no-show trend will have the greatest impact on the likelihood patients will adhere to or miss a scheduled appointment (Torres et al., 2015). Patient perception, scheduled day of the appointment, the racial and ethnic group, and gender and age of an individual are common trends that affect no-show

rates in outpatient clinics (Dantas et al., 2018; Kheirkhah et al., 2016; Kontos et al., 2011, Mehra et al., 2018; Mohammadi et al., 2018; Torres et al., 2015).

Patients can be a hindrance to their own healthcare access because of certain perceptions regarding healthcare (Torres et al., 2015). Studies show that, individuals in MUP tend to feel disconnected from the healthcare system and discriminated against by healthcare providers, and are distrustful of medical professionals (Kontos et al., 2011; Toscos et al., 2018). Opinions about healthcare can lead to missed appointments, reluctance to schedule an appointment, and avoidance of going to healthcare clinics (Dantas et al., 2018; Mehra et al., 2018; Mohammadi et al., 2018; Shimotsu et al., 2016; Torres et al., 2015).

Appointment compliance was affected by the day of the week with patients less likely to show up for appointments on a Monday (Dantas et al., 2018; Kheirkhah et al., 2016). Lead-time, the days between scheduling an appointment and the date of the appointment, was also a factor in a missed appointment (Dantas et al., 2018; Kheirkhah et al., 2016). For example, if lead-time was more than seven days away from the scheduled appointment, the likelihood of the patient not showing up increased by as much as 41% (Dantas et al., 2018; Kheirkhah et al., 2016; Mohammadi et al., 2018). Patients are not adherent to their scheduled appointments if appointments are made too far out in advance (Dantas et al., 2018; Kheirkhah et al., 2016; Mohammadi et al., 2018).

Several studies on the topic revealed that Hispanics and African Americans had the highest incidence of appointment no-shows in comparison to their White counterparts (Dantas et al., 2018; Mehra et al., 2018; Mohammadi et al., 2018; Shimotsu et al., 2016). Shimotsu et al. (2016) studied the prevalence of no-show rates in different racial and

ethnic groups and found that out of 436,580 completed outpatient visits, the odds of a Hispanic or African American missing a scheduled appointment was 2.02 and 1.82 times higher versus White groups.

Gender and age also had an impact on appointment compliance. Although women utilize outpatient care services more than men, women have higher rates of no-show appointments in comparison to men, though an explanation was not given in the literature (Kheirkhah et al., 2016; Mehra et al., 2018; Miller, Chae, Peterson, & Ko, 2015). In the study by Miller and colleagues (2015) aimed at predicting reasons for appointment no-shows in the outpatient setting, of 6,311 outpatient appointments that were identified as no-shows, females were 1.60 times as likely to no-show more than men. Additionally, trends among the literature concluded patients age 35 or younger have higher rates of appointment nonattendance due to unemployment status, familial responsibilities, or find difficulty in getting the scheduled time off from their employer (Dantas et al., 2018; Hwang et al., 2015; Miller et al., 2015; Mohammadi et al., 2018).

Evidenced-Based Approaches to Improve Health Outcomes in MUP

The interventions and methods used to address the health needs of MUP and prevent appointment non-shows are multifaceted (Anderson et al., 2015; Horvat et al., 2014; Jia et al., 2014). Interventions best suited to assist patients with appointment compliance will depend on the needs of the individual patient and require evidence-based screening tools, cultural competence, care coordination efforts, and scheduling process changes to meet the complex demands of MUP.

Screening Methods

The use of evidence-based screening tools is helpful in identifying factors which impede access to healthcare. A screening tool should demonstrate validity and reliability to accurately measure unmet social needs and social determinants to health, but all screening tools will have limitations in what is reported by patients (Garg, Sheldrick, Dworkin, 2017). The Accountable Health Communities Health-Related Social Needs Screening Tool (HRSN) developed by the Centers for Medicare and Medicaid Services (CMS) is a useful 26 item questionnaire created to screen for psychosocial barriers which hinder health outcomes (Billieux, Verlander, Anthony, & Alley, 2017). The HRSN tool screens patients for core psychosocial barriers such as hunger, employment status, homelessness, familial support, and lack of transportation and measures how these psychosocial barriers affect healthcare costs and healthcare access (Billieux et al., 2017; CMS, 2017).

Core psychosocial barriers are scored depending on a patient's response to a question of yes or no, never, once or twice, monthly, weekly, or daily/almost daily and a patient who responds affirmatively to any question will prompt a clinician to initiate further assessment into the social need (CMS, 2017). For example, one question on the HRSN assesses how difficult it is for an individual to afford basics such as medical care, housing, food or heating (CMS, 2017). If a patient response is yes, the clinician will delve deeper into the social need of the patient (CMS, 2017). The HRSN tool was designed to be completed by the individual, however, the HRSN can also be administered with assistance from a friend, family, medical assistant, or a provider (CMS, 2017). The HRSN screening tool is comprehensive and can be administered to individuals from

various SES and backgrounds to increase awareness into the social needs that create deterrents to healthcare (Billioux et al., 2017; Garg, Sheldrick, Dworkin, 2017). Also, The HRSN is effective in fast-paced clinical settings or workflows and should be used routinely by providers to investigate the complex social needs that affect patient healthcare access (Billioux et al., 2017; Garg, Sheldrick, Dworkin, 2017).

When psychosocial barriers are not addressed, patients are at continued risk for poor health outcomes and increased healthcare costs (Billioux et al., 2017). For example, the lack of resources to afford basic human needs such as housing, food, and medical care causes undue stress and increased risk for health inequalities and illness (Billioux et al., 2017; CMS, 2017; Garg, Sheldrick, Dworkin, 2017). Unmet healthcare needs will impact an individual's adherence to healthcare, but these unmet needs and barriers can be identified and addressed with the assistance of a screening tool like the HRSN. Through the identification and resolution of barriers, clinicians can reverse harm to a patient's health outcome and health behaviors through coordination of care and referrals to available community resources and services (Billioux et al., 2017; CMS, 2017). Based upon the patient's response to the screening tool, it is recommended that case managers provide immediate interventions such as cash aid, medication, or vouchers for transportation (Garg, Sheldrick, Dworkin, 2017; Archer et al., 2012; Harkness & Bower, 2009; Kim et al., 2016). In a pilot study conducted by Molina et al. (2018), the HRSN tool was implemented in a highly utilized emergency department to assess the disproportionate social needs of patients. Of the 191 patients that were screened by the HRSN tool, 17% of patients reported a scarcity of food, 15% cited safety as a concern, 15% reported unstable housing, and 11% cited transportation needs (Molina et al., 2018).

Though one-hundred percent reliability is not possible on any screening tool as results are based on accurate reporting of the patient, the HRSN has been used in the outpatient and emergency department settings to illustrate the need for clinicians to assess for potential psychosocial needs of at-risk populations like MUP in an effort to improve healthcare access (Garg, Sheldrick, Dworkin, 2017; CMS, 2017, Molina et al., 2018).

Care Coordination

Individuals among MUP have complex medical needs which require a team-based approach to formulating and carrying out treatment plans (Clarke et al., 2015; Elliott et al., 2016; Song et al., 2017; Vanderboom, Thackeray, & Rhudy, 2015). Care coordination is one approach to collaboratively address psychosocial barriers to patient's healthcare access and health outcomes to ensure patients are managed satisfactorily in the outpatient primary care clinic. The National Academy of Medicine identifies care coordination as an essential practice to ensure complex need patients receive safe, effective and efficient healthcare through an assessment of a patient's individual's particular needs within the healthcare system and personal environment (Agency for Healthcare Research and Quality [AHRQ], 2018). The AHRQ (2014) states that a standardized definition and role of care coordination does not exist after a systematic review of literature identified well over 40 definitions for the care coordination term. Therefore, the AHRQ (2018) broadly refers to care coordination in the outpatient primary care clinic as a comprehensive, team-based, coordinated, patient-focused approach to deliberately provide high-quality care, through increased communication among individuals who are involved in the patient's care. The main functions of care coordination include a case manager assisting in the coordination of care, communicating and acting as a liaison between the provider and

patient, and a collaborator for all patient needs (AHRQ, 2014; AHRQ, 2018; Wheeler & Muller, 2017).

In the patient-provider visit, a provider may identify that a patient has a complex health or psychosocial need that requires closer follow up and will then call upon a point person, often a case manager, to assist the patient in coordinating activities to address the identified needs to optimize the patient's healthcare outcomes (AHRQ, 2018, AHRQ, 2014; Wheeler & Muller, 2017). Case managers are integral to the care coordination process and have a non-clinical role to ensure patients are connected with appropriate resources to mitigate health or psychosocial barriers (Ahmed, 2016; Kim et al., 2016). Case managers develop customized care plans better tailored to meet the patient's individualized healthcare and psychosocial barriers and assist patients in navigating the healthcare system, provide education on social services, increase access to community resources for food or medication, and encourage compliance in continuous healthcare appointments through the facilitation of open dialogue of shared information gathered from clinic appointments (AHRQ, 2014; AHRQ, 2018; Clarke et al., 2015; Elliott et al., 2016; Song et al., 2017; Vanderboom et al., 2015; Wheeler & Muller, 2017).

Patients with complex needs and chronic disease who receive closer monitoring and multiple, interventions to prevent adverse health outcomes and to promote wellness, will benefit from coordinated case manager led interventions (Ahmed, 2016). Case managers will assist the patient with establishing a connection with community resources, arrange any needed follow up appointments, assess patient's healthcare goals and needs, establish accountability and responsibility in a patient's personal healthcare, or assist in transition and stabilization of any healthcare needs in the home (AHRQ, 2018). These

coordinated efforts are completed through the facilitation of patient's individualized care plans, interventions, and evaluation of the patient's complex care through ongoing communication techniques between all members of the care coordination process (Ahmed, 2016; Archer et al., 2012). For example, in a proposed framework by Ahmed (2016), structured, organized case management efforts aimed at reducing external psychosocial influences and risk factors, will benefit patients with chronic conditions such as DM and CHD.

Patients with chronic diseases who are on Medicaid are often difficult to contact and so do not receive follow-up care. By using formalized, coordinated, outreach efforts, case managers can support this vulnerable population (Ahmed, 2016). Evidence is still lacking in illustrating the benefits of care coordination in vulnerable populations like MUP where health disparities and psychosocial needs are great, but case manager interventions have been effective in urban areas and across other healthcare settings (Conway et al., 2016). For example, in a single-case study design by Conway et al. (2016), researchers implemented a new care coordination program where case managers increased communication and intervention techniques such as assessment, outreach, follow-up and referrals for patients within a small, low SES, rural, primary care clinic with a population high in health disparities, to assess patient's health and wellness outcomes and emergency department utilization. Case management efforts were increased to connect the 47 enrolled patients to appropriate services to address psychosocial needs, and as a result, the total emergency room visits decreased from 58 visits to 15 visits within six months of enrollment (Conway et al., 2016). The Conway et al., (2016) study illustrates that by increasing structured follow-up and collaboration with

case managers in primary care clinics, patients care needs are addressed. Case manager assistance for patients with identified psychosocial barriers will ensure that the patient's needs will be addressed and in turn, the patient will become engaged in their own care and achieve optimum wellness (AHRQ, 2014; AHRQ, 2018, Ahmed, 2016).

Scheduling

Clinics with efficient scheduling guidelines will decrease their no-show rate as well as improve the health outcomes among patients. When examining the scheduling issues related to MUP, specific guidelines may help to address the barriers identified in the area of scheduling and patient access (Mendenhall et al., 2017; Toscos et al., 2018). A structured approach to scheduling will increase the number of staff working together to increase patient access to healthcare (Cronin & Kimball, 2014).

An evidenced-based method to address no-shows should also consider the psychosocial barriers to healthcare within the MUP. The research focused on implementing a multi-modal approach to scheduling, which utilized patient appointment reminders through both automated phone calls and manual phone calls (Cronin & Kimball, 2014). For example, when automated calls were used to remind patients of appointments, the attendance rate increased by approximately 29% (Cronin & Kimball, 2014). However, when clinic staff made manual phone calls attendance rates increased approximately 39% (Cronin & Kimball, 2014). It is believed that the increase in attendance when staff called was due to the human connection (Cronin & Kimball, 2014).

Other methods for decreasing no-shows were the use of open-access appointment slots. Open-access refers to slots left intentionally open to accommodate patients who call the clinic to request an immediate appointment or come directly to the clinic with an

acute healthcare need (Guo & Yao, 2017). Rather than wait days to weeks to see a provider, this method is designed for patients who need to be seen urgently the same (Guo & Yao, 2017). The longer the time between scheduling an appointment and the actual appointment, the more likely patients are to no-show (Guo & Yao, 2017). This may be explained by the tendency among MUP to only seek care when they believe they need too, which is during times of acute illness (Guo & Yao, 2017). By adjusting a clinic's scheduling guideline and implementing open access as a process change, healthcare access will increase. Individuals within MUP are diverse and complex in characteristics, which makes using one method of intervention for scheduling insufficient (Biggerstaff & Short, 2017; Cronin & Kimball, 2014; Mendenhall et al., 2017; Peng, Qu, & Shi, 2014; Tang, Yan, & Cao, 2014; Toscos et al., 2018).

The complex barriers among patients in MUP can be better understood when providers and healthcare professionals practice cultural competence by considering the cultural and psychosocial influences on patient's health and through the utilization of the HRSN tool to identify barriers which impede a patient's health outcomes. When barriers are identified, case managers are best suited to address the needs of the patient to promote resolution of barriers in a coordinated and patient-focused methods to encourage appointment compliance and promote health and wellness.

METHODS

The purpose of this doctoral project is to adapt and implement a screening tool to identify the most prevalent psychosocial barriers to appointment adherence to decrease no-show rates and develop targeted interventions aimed to improve resources and services available in an MUP. The following sections describe the design, setting, stakeholders, data collection, target population, and the ethical considerations surrounding MUP. The HPM (Figure 1) serves as a guide for understanding how psychosocial barriers affect health-promoting behaviors.

Setting

This DNP project will take place in a FQHC in San Pedro, California. The project clinic is in a low-income, multicultural and racially diverse area. This outpatient primary care clinic specializes in family practice, women's health, prenatal services, and mental health services. Each provider sees an average of 15 to 28 patients a day, Monday through Friday, from 8:00 am to 7:00 pm. The practice utilizes *eclinicalworks* program for the electronic health record. Providers at the project clinic do not routinely screen patients for psychosocial barriers, which may impact appointment adherence, health behaviors, and healthcare quality.

Stakeholders

The stakeholders for this project are four physicians, four nurse practitioners, (one of whom is the project author), and one physician assistant. Additional stakeholders are one licensed mental health therapist, two psychologists, six front office staff members, thirteen medical assistants, one case manager, two insurance enrollment specialists, and seven administrative managers. The stakeholders are in agreement that the

implementation of a clinic-wide screening tool will provide a clearer understanding of how psychosocial barriers affect patients within the project clinic and agree to have all patients screened in the same manner.

Target Population

The focus of this DNP project is to adapt and implement a screening tool to identify psychosocial barriers to appointment adherence to decrease no-show rates in an MUP. To complete this aim, the project will attempt to screen a sample of the clinic population ($N = 6465$). There are 464 patients who are homeless, 41% of patients are female, and 64% of patients identify themselves as minorities. Almost half of the patients are underinsured or use Medicaid.

Ethical Considerations

The project was submitted and approved through the institutional review board (IRB) at California State University, Fullerton (see Appendix A). Patient anonymity will be protected with the use of medical record number as the only identifier to track patients involved in the project. Completed screening tools will be kept in a locked file box, within the case manager's private office that is kept locked at all times. Any healthcare information that is shared by interdisciplinary members will be encrypted. The project author's private password protected computer will be kept in a locked cabinet in a private residence that is protected by an alarm system. Lastly, the project clinic granted the project author permission to conduct the DNP project within the clinic setting (see letter in Appendix B).

The target population is considered vulnerable because patients within the project clinic are racial and ethnic minorities of low SES. Components of this project require

direct interaction and communication with patients through the use of the adapted screening tool. Although the screening tool is being adopted as a standardized clinic process that will be implemented to all patients, the screening tool may increase patient vulnerability and distress as psychosocial stressors and barriers are identified, therefore, consent of the patient is required (see Appendix C).

Development of the Barriers to Health Questionnaire

The review of literature validated the use of the HRSN as an effective screening tool to identify social needs that affect an individual's health. The project author reviewed the 26-question HRSN tool and adapted particular questions to address the identified themes within the DNP project and created a brief 10-question screening tool, certifiably translated in Spanish below an eighth-grade readability level (see Appendix D); hereby known as the Barriers to Health Questionnaire ([BHQ], see Appendix E).

A request for permission to use the HRSN was attempted via email to Dawn Alley and Katherine Verlander, both creators and authors of the HRSN. In an emailed response from Katherine Verlander, this project writer was given permission to use the HRSN tool as Verlander stated this tool was intended for public use.

Logistics of Distribution

The BHQ will be available in English and Spanish. The project author will print copies of the BHQ weekly and divide the BHQ between each medical assistant to be dispersed to each patient in the same manner.

Questions Adapted from the HRSN

The BHQ has six questions adapted and influenced from the HRSN. For example, Question 1 *Is language a barrier to your care?* is adapted from the HRSN which asked if

a different language was spoken in the home (CMS, 2017). Betancourt and colleagues (2016) and Meuter and Colleagues (2015) found that language barriers in the clinic setting disrupt and may hinder clinical information that is communicated by providers or patients during an appointment. The project author adapted the question to directly ask the patient if a language is a barrier to their care to better understand if patients within the project clinic feels understood or can understand health information communicated to them.

Questions 2 *Is reliable transportation a barrier to your care?* is adapted from the HRSN which asked a similar question how transportation affected work, meetings, and medical appointments (CMS, 2017). In an effort to focus directly on transportation barriers to an individual's access to healthcare, the project author simplified the question to inquire if reliable transportation is a barrier to healthcare. Assessing a patient's access to a car or public transportation will alert the provider if the lack of stable transportation has prevented the patient from maintaining healthcare appointments or follow-up care.

Question 3 *Within the past 12 months, have you had difficulty accessing food and clean water?* is adapted from the HRSN which inquires if a patient is *worried* about food running out (CMS, 2017). Decker & Flynn (2018) identified that a lack of access to healthy food and water or a lack of resources to purchase food is detrimental to an individual's health. Therefore, the project author structured the question to move beyond if a patient was worried about food running out and directly inquires if a patient has difficulty accessing food and water.

Question 4 *Are you unemployed?* Is adapted from the HRSN question that inquired if a patient would like assistance finding a job (CMS, 2017). According to

Buffell and colleagues (2017), if an individual does not have secure employment, the individual is likely to be without financial means to afford healthcare costs, housing or food. Therefore, the project author designed the question to directly measure if the patient is unemployed to ascertain if the patient's unemployment status is affecting their healthcare or ability to adhere to clinic appointments.

Question 5 *Are you homeless?* is adapted from the HRSN question which asks if the patient has reliable housing or a place to stay (CMS, 2017). Based on the review of literature, the project author condensed the question to succinctly ask if the patient is experiencing homelessness because an individual's lack of access to stable housing impacts health outcomes and access to healthcare (Medcalf & Russell, 2014; Narendorf, 2017).

Lastly, Question 6 *Can you afford healthcare costs for medication, copays, or therapies?* is adapted from the HRSN question which asked if a patient was experiencing financial strain to pay for food, housing, heating or medical costs (CMS, 2017). Rather than focusing on varying aspects of what a patient can afford, the project author considered Kim and colleagues (2017) which found that patients from lower SES have barriers to healthcare access because they cannot afford healthcare costs. Consequently, the project author solely designed the question to ask specifically about affording medication, copays, and therapies.

The HRSN also screens for substance abuse and mental illness. Within the project clinic, the current process for assessment of substance use is currently in place and completed by the medical assistant. Mental illness is also assessed by the medical assistant using the Patient Health Questionnaire 9 and 10 (PHQ-9 and PHQ-10) at each

clinic appointment. Consequently, the project author opted to exclude these questions from the BHQ to avoid redundancy. Although the HRSN has additional questions to screen for patient safety, education, physical activity, and disability, the project author excluded these questions from the BHQ to ensure that the questions on the BHQ solely concentrated on the identified themes produced from the review of literature.

Additional Developed Questions

The remaining questions on the BHQ consist of inquiries that were not found on the CMS HRSN but are necessary to address the themes within the review of literature. For example, Question 7 *Do you have insurance?* is in line with identifying patients who lack insurance coverage. Uninsured individuals have poor health outcomes and are less likely to adhere to clinic appointments if they do not have insurance coverage (Dantas et al., 2018). The project author addressed this barrier with a candid question if the patient has insurance so that the patient can be routed to available resources or programs.

Question 8 *Do you have childcare issues?* will clarify if childcare is truly a hindrance to appointment adherence in MUP. Although childcare was cited in several articles as barriers to appointment adherence, the literature noted that evidence supporting how insufficient childcare in MUP impacts healthcare access is currently lacking. The project author implemented this question to identify if childcare is affecting patient's ability to comply with a scheduled appointment.

Question 9 *Can you be reached by telephone?* and Question 10 *Has scheduling conflicts caused you to cancel your clinic appointment?* will address the review of literature findings that patients are more likely to miss a scheduled appointment depending on the day of the week and lead time, or that telephone reminder calls were

helpful in increasing appointment attendance (Biggerstaff & Short, 2017; Cronin & Kimball, 2014; Mendenhall et al., 2017; Peng, Qu, & Shi, 2014; Tang, Yan, & Cao, 2014; Toscos et al., 2018). The project author implemented these two questions to identify if the patient has scheduling conflicts that need to be considered, as well as telephone access to receive any telephone reminders for upcoming appointments.

Clinic Process Procedure

Initial Discussion

An initial meeting will be held prior to conducting the BHQ in the project clinic. Within this meeting, a brief PowerPoint highlighting how patient health outcomes and health behaviors, like appointment adherence, can improve through screening for psychosocial barriers, will be presented to the stakeholders by the project author. Stakeholders involved in the project clinic will be informed of the purpose of the BHQ will provide the healthcare providers a printout detailing a step-by-step process for the administration of the BHQ to all patients, clinic-wide. Clinic providers will receive adequate time to review the questions of interest. Providers will be instructed to use the current established referral intervention using the referral tab in *eclinicalworks*, for patients who are identified as having a psychosocial need.

Referral Intervention

If a patient responds “yes” to any questions presented on the BHQ, the provider will be alerted to refer the patient to the clinic’s case manager via the *eclinicalworks* tab for assistance to assess linguistic barriers, transportation, childcare, food insecurity, homeless status, resource needs, and scheduling conflicts.

After the case manager has determined the nature of the barrier to healthcare access and appointment adherence, the case manager will be responsible for addressing the patient's needs and if needed, meeting with the patient. The case manager will guide the patient and provide appropriate resources, according to their practice, for food, homeless shelters and housing programs, prescription coverage programs, an enrollment specialist for insurance qualification, childcare programs, employment services, or ensure a translator is available on subsequent clinic visits, if needed. If the patient's need is determined to be scheduling conflicts, the case manager will speak with the clinic scheduler in person or via telephone to relay the patient's scheduling preference and to ensure that subsequent visits are reflective of patient's preferred day of the week and time. The case manager will report any issues to interventions, resources, or therapies needed for the patient to the project author to continue open dialogue and shared responsibility.

Implementation of Screening for Barriers Process

1. Prior to the patient's clinical assessment, all patients will be instructed by the medical assistant to complete the *Barriers to Health Questionnaire*
2. Conduct the *Barriers to Health Questionnaire*
3. The patient will be asked by the medical assistant if they would like assistance completing the BHQ
4. If the patient chooses to complete the questionnaire with assistance, the medical assistant will review each question with the patient.

5. If the patient chooses to complete the questionnaire independently, the patient will be supplied a pen and clipboard and informed to directly mark “Yes” or “No” on the BHQ
6. Providers will review the BHQ during the clinic visit and refer the patient to the case manager for follow-up using the *eclinicalworks* referral tab in the patient’s chart
7. Medical assistants will collect the completed BHQ and place the BHQ in a box in the case manager’s office
8. Upon receipt of the electronic *eClinicalWorks* referral, the case manager will implement their current process to address identified needs from the BHQ

Data Collection

The BHQ screening tool will be administered a total of 14 days from September 2019 to October 2019 to all patients within the project clinic with several measurement goals (Table 1). Data from the BHQ will measure if the implementation process of the BHQ was effective by assessing:

- a. Did the patient get referred to the case manager?
- b. Did the case manager meet with the patient or address the patient’s barrier?
- c. Did the patient adhere to the next scheduled appointment?
- d. Prevalence of barriers within the clinic

The project author will initiate a screening-tool review for all completed BHQs using the clinic EHR. Using only the medical record number as an identifier, the project author will sign-on to the clinic computer station, and enter the medical record number into the EHR and select the tab “encounter.” In the encounter screen, the project author

can visualize and determine if the patient was referred to the case manager, if the patient met with the case manager, or if the patient completed a subsequent scheduled appointment. All dates and encounters are clearly listed therefore, the project author does not have to open the patient's chart or access private health information.

If the project author determines that the case manager has not yet met with the patient during review of the BHQ, the project author will allow time for the case manager to complete the current clinic process, and will notate the medical record number on a separate excel sheet and continue to check weekly, through December 2019, to verify if the case manager intervention has been completed. Any referral intervention that falls out of this range will be considered not addressed. Lastly, the BHQ will provide a snapshot of the prevalence of barriers within the project clinic.

Table 1

Project Timeline

BHQ Screening	Planned Intervention	Referral F/U
Language Barrier	Implemented September - October 2019	Ongoing September - December 2019
Employment Status		
Childcare Issues		
Food Insecurity		
Homelessness		
Resources		
Schedule Barriers		
Measures		
Did the patient get referred to the Case manager	Analyzed September – December 2019	Discuss findings with clinic administrators. Initiate grant writing based on results of the BHQ analysis if indicated, or reprocessing of clinic practices December 2019–January 2020
Did the Case Manager meet with the patient or address the patient’s barrier?		
Did the patient adhere to the next scheduled appointment?		
What are the prevalent barriers clinic-wide?		

Data Analysis

All BHQ data will be entered, stored, and analyzed through Qualtrics software. If needed, a statistician will further analyze the data gathered from Qualtrics data system. Descriptive analysis will use the qualitative information from the clinic population to produce frequency tables displayed as bar charts to visually represent the prevalence of barriers and to draw inferences from responses from MUP. A bivariate comparison using a Chi-Squared analysis to test for significance if patients with an identified psychosocial

barrier addressed by the case manager, adhered to their next scheduled follow-up appointment will also be completed using SPSS software.

Evaluation and Follow-Up

Patients from the project clinic are only a small population within a larger MUP. The findings from the BHQ administered 14 days from September 2019 to October 2019 are intended to shed light on the types of psychosocial barriers affecting patient's appointment adherence, health-promoting behaviors, and will provide valuable information on how to address the MUP within the project clinic. The project author will also evaluate if the BHQ screening was completed but a referral was not completed by the provider, which could indicate a lack of education about the process for case management by the providers. Or, if BHQ screening is completed and referral was initiated, but the patient did not meet with the case manager or the patient did not receive the services needed based on screening results, then perhaps there is a need an additional case manager or a more comprehensive case management referral program. Lastly, based on the results from the most prevalent barriers within the project clinic, the project author would consider how to best address the needs.

At the conclusion of the analysis of data, the project author and stakeholders will discuss the executive summary of the project findings, including an overview of the project measures and associated results of each measure. A close review of how effective it was for the case manager to complete the referrals will be discussed. The project author will request the case manager to provide feedback on the feasibility or difficulties of completing patient referrals. The project author will also present the two most prevalent psychosocial barriers within the project clinic and if patients with an identified

psychosocial barrier and who had met with a case manager, had a significant impact on appointment adherence.

If the BHQ findings indicate that a majority of referrals to the case manager were not completed, and/or the case manager feedback cited difficulties in completing referrals due to caseload or the lack of assistance, or if the two most prominent barriers would be better addressed with additional funding to improve access to resources, the project author and stakeholders will discuss clinic resources. Assuming there is room for improvement post-BHQ implementation findings and feedback, the project author will request that the stakeholders assess the project clinic's current financial and staffing resources and identify if any funding may be allocated to improving the two most prominent barriers or, increasing resources to increase funding, or change in clinic processes/practices for a more comprehensive case management program. After review, if the stakeholders determine that the two identified psychosocial needs are beyond the clinic's available financial resources to provide allocation for additional food, housing, transportation, medication, and childcare, or does not have the funding to support the growth of a more comprehensive case management program, the project author will request permission to participate in grant writing activities to government sponsored organizations in an effort to increase funding for resources, or discuss other ways to improve patient's healthcare outcomes.

Additionally, if the BHQ proves helpful to the project clinic based upon the stakeholder's evaluation of finding, the implementation of the BHQ directly into *eclinicalworks* will be proposed for ongoing standardization of clinic practice and

assessment of patient's psychosocial needs in hopes to increase patient appointment adherence and health-promoting behaviors.

RESULTS

Post-implementation of the BHQs in the project clinic yielded 334 BHQs collected. Of the 334 BHQs collected, six were excluded in project analysis because they lacked a medical record number (n = 3) or the BHQ was not fully completed by the patient (n=3). A total of 328 BHQs were analyzed.

Patient Demographics

The patient demographics are presented in Table 2. The sample contained a wide range of ages, with the highest percentage reporting their age to be between 41 and 55 years. The most common reported race was Hispanic, Latino and the majority of participants were females (68.6%).

Table 2

Patient Demographics

Variable	n (%)
Age	
18-25	21 (6.4)
26-40	91 (27.7)
41-55	114 (34.8)
56+	102 (31.1)
Race	
American Indian or Alaska Native	2 (.60)
Asian	6 (1.8)
Black or African American	29 (8.8)
Native Hawaiian or Pacific Islander	1 (.30)
Hispanic, Latino	212 (64.6)
White	78 (23.8)
Gender	
Female	225 (68.6)
Male	103 (31.4)

Referral and Appointment Attendance

Of the 328 patients, 164 (50%) were referred to the case manager. Of those 164, 158 patients (96%) spoke with the case manager and had their perceived barrier addressed. Of those 158, 111 (70%) patients did adhere to the next scheduled appointment, 24 (15%) did not adhere to the next scheduled appointment, 14 (9%) were scheduled past the study date, and 9 (6%) were not scheduled for an additional appointment (see Figure 2).

A chi-square analysis revealed significantly higher ($p=.007$) attendance at the next scheduled appointment for those patients with an identified psychosocial barrier who were referred to a case manager ($n=115$, 70.1%) compared to those who were not referred ($n=53$, 50.8%).

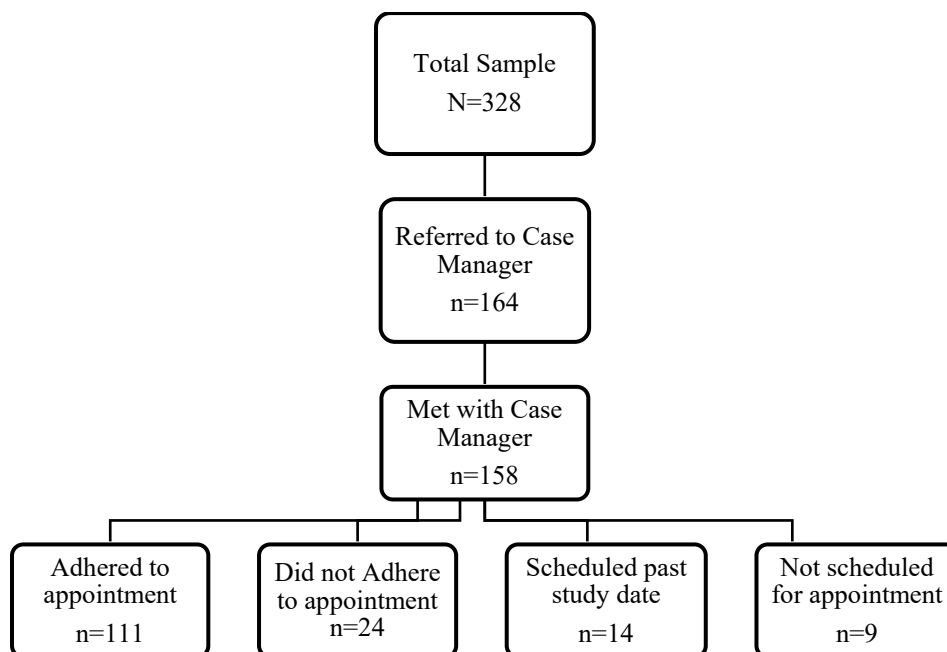


Figure 2. Referral and Appointment Attendance

Barriers in the Medically Underserved Population

Descriptive statistics helped to determine which barriers are most prevalent in the project clinic. Figure 3 displays the percentage of participants reporting each psychosocial barrier. The two most prominent psychosocial barriers identified within the project clinic were a lack of insurance (76%) and healthcare costs too high (71%), with only 20% of patients reporting scheduling conflicts, or transportation (12%) as a barrier.

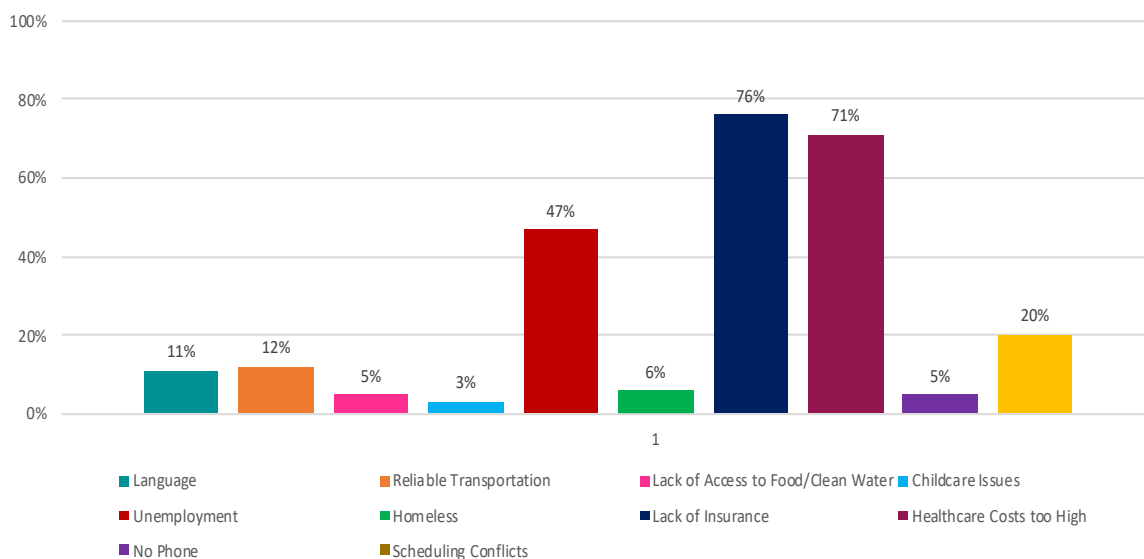


Figure 3. Prevalence of each reported barrier

DISCUSSION

Medically underserved populations endure poorer health outcomes and suffer increased rates of chronic disease due to increased psychosocial barriers to healthcare access and increased appointment nonadherence rates (Dickman et al., 2017; Toscos et al., 2018; Jack et al., 2012). This DNP project applied existing knowledge about MUPs to develop an evidence-based screening tool to identify which psychosocial barriers are most affecting the project clinic, and secondarily, an aim to determine if case manager intervention would improve appointment adherence. The findings from this DNP project support the current literature that Hispanic, Latinos and women predominately have higher rates of psychosocial barriers to healthcare and economic barriers, such as the lack of insurance, and the inability to afford healthcare costs, are the leading obstacles to healthcare access within this MUP. With this knowledge, Hispanic, Latino women should be routinely screened for psychosocial barriers within the primary care setting to decrease health disparities in this patient demographic.

With the knowledge that the project clinic suffers from a high no-show rate, this process was successful in elucidating how case manager intervention improves patient attendance rates. Statistical evidence generated from the BHQ supports the claim that patients with an identified psychosocial barrier are more likely to adhere to their next appointment if they are referred to a case manager. These findings support the literature that primary care providers and case managers within MUPs must not only consider the psychosocial barriers affecting patient appointment adherence and healthcare access, but enlist alternate methods and interventions to target this diversified and socioeconomically disadvantaged population (Biggerstaff & Short, 2017; Cronin & Kimball, 2014;

Mendenhall et al., 2017; Peng, Qu, & Shi, 2014; Tang, Yan, & Cao, 2014; Toscos et al., 2018). Thus, addressing a high no-show rate in an MUP can be achieved by provider screening of patients for psychosocial barriers and through the development of a robust case manager program capable of addressing and resolving barriers.

The implementation of the BHQ into the project clinic was a process change in which providers had the responsibility of screening and referring patients with identified barriers to a case manager. This new process demonstrated that interdisciplinary coordination between the primary care provider and a case manager is an effective approach to identify barriers which impede a patient's healthcare access and can improve healthcare in MUPs. At this time, the project clinic will not implement the BHQ as a permanent process change, however, the stakeholders understand the importance of screening for psychosocial barriers to improve appointment adherence. The project clinic intends to maintain their current case management program and are currently looking into other national screening tools that can be completed by case managers, rather than providers.

Future Steps

Within the project clinic, a majority of patients have My Health Los Angeles, or a form of Medicaid, in which clinic visit copays and medications are covered. It was an unexpected finding that the two most prominent psychosocial barriers affecting patients within the project clinic were underinsured or medication costs being too expensive. Further investigation into this phenomena is needed to better understand if patients with Medicaid or My Health Los Angeles perceive themselves to be uninsured due to limitations in coverage for certain medications, specialty services or consults, or medical treatments, or if out-of-pocket deductibles are too expensive in this population. As such,

the project clinic will not pursue a grant for additional funding for the two most prevalent barriers until more is known about patient perception of Medicaid. However, grant writing is a viable option for clinics who have identified barriers which can be resolved with monetary resources.

Limitations

During the implementation phase, there were missed opportunities for patients to participate in completing the BHQ. Common reasons cited by providers and medical assistants included a too busy of workflow, including ensuring patients were vitaled quickly for more than one provider and obtaining consents for the Influenza vaccine which took precedence over the BHQ. Additionally, within the project clinic, provider staffing became a barrier due to unexpected provider absences and shortages. To rectify this shortage, the project clinic hired contractors, but some contractors were unwilling to participate in the review of BHQ and case manager referral because they felt they were still adapting to the newness of the clinic. These limitations can be expected in any clinic as staffing, clinic workflow, and processes can change at any moment in which providers and ancillary staff must adapt to meet the current needs of the clinic.

CONCLUSION

This DNP project has shown that the implementation of the BHQ, a social needs screening tool, significantly influenced patient appointment adherence when case managers met with patients assessed as having a psychosocial barrier. The BHQ can be utilized to assist in determining which psychosocial barriers exist most prominently in an MUP within any outpatient primary care clinic. A majority of psychosocial barriers to healthcare access may not be easily rectifiable, but this project exemplifies that provider screening for psychosocial barriers, in conjunction with a case manager referral process, is a valuable method to address barriers hindering a patient's access to healthcare.

Implications to Practice

Further research into the efficacy of the BHQ is warranted to continue efforts to improve healthcare disparities. Exploration into the benefits of the role of case management to enhance barrier specific interventions to promote improved health outcomes within MUP is essential to target specific interventions to improve care in MUP. Furthermore, a continued acceptance and understanding of how psychosocial barriers negatively affect health outcomes is critical to ongoing efforts to improve appointment adherence and secondarily, to increase healthcare access and healthcare outcomes in a population that is otherwise at-risk of dying based solely on racial and SES disparities, from chronic disease.

Dissemination

Results from this DNP project will be disseminated at the 2020 Western Institute of Nursing in Portland, Oregon.

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APPENDIX A: IRB APPROVAL**CALIFORNIA STATE UNIVERSITY, FULLERTON***Office of Research and Sponsored Projects*

P.O. Box 6850 or 1121 N. State College Blvd., 2nd Fl., Fullerton, CA 92831 / T 657-278-7719 / F 657-278-7238

APPROVAL NOTICE*From the Institutional Review Board
California State University, Fullerton***September 6, 2019****From: Dr. Matt Englar-Carlson, Chair
CSUF Institutional Review Board****To: PI: Gabriella Garza**

Application No. HSR-18-19-657

Study Title: Identifying Barriers in a Medically Underserved Population

Re: Initial Exempt Review

The forms you submitted to this office regarding the use of human participants in the above-referenced proposal have been reviewed by the Regulatory Compliance Coordinator and the Chair of the California State University, Fullerton, Institutional Review Board. Your proposal is determined to be Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

The CSUF IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

It is of utmost importance that you strictly adhere to the guidelines for human participants and that you follow the plan/methodology/procedures described in your research proposal. Since your proposed was determined to be

exempt, there is no further review or annual renewal required by the CSUF IRB. **However, any change in protocol or consent form procedure requires re-submission to the CSUF IRB for approval prior to implementation.** Additionally, the principal investigator must promptly report, in writing, any unanticipated or adverse events causing risks to research participants or others.

Please be advised that if you are seeking external funding for this proposal, the above-reference title should match exactly with the title submitted to the funding sponsor. Any changes in project title should be submitted to the CSUF IRB prior to implementation.

By copy of this notice, the chair of your department (and/or co-investigator) is reminded that their responsibility for being informed concerning research projects involving human participants in the department, and should review all protocols of such investigations as often as needed to ensure that the project is being conducted in compliance with our institutional policies and with DHHS regulations.

The institution has an Assurance on file with the Office of Human Research Protections. The Assurance Number is FWA00015384.

Cc: IRB Office
Deanna Jung

APPENDIX B: LETTER OF SUPPORT FROM CLINIC

593 W 6th St, San Pedro, CA 90731

May 29, 2019

California State University Fullerton
Department of Nursing
Doctor of Nursing Practice Program
Attn: DNP Program Directors


To Whom It May Concern:

On behalf of Harbor Community Clinic, I am writing to grant permission for Gabriella Garza, FNP, to conduct and complete her DNP project *"Identifying Barriers in a Medically Underserved Population in an Effort to Decrease No-Show Rates."*

I understand that Gabriella will utilize clinic patients and data to investigate and better understand how psychosocial barriers hinder patient care and increase no-show rates. Gabriella's project aims to identify these barriers and to evaluate the future possibility of creating new processes within the clinic to better serve this unique patient population. Part of Gabriella's focus in her DNP project will be to communicate with patients from medically underserved populations. Methods discussed include an evidence-based screening tool to survey patients based on Nola Pender's Health Promotion Model.

I have been communicating closely with Gabriella and will continue to guide Gabriella and be a support to her and her DNP project.

We are happy to participate in this study and contribute to this important research that will impact the organizational structure of Harbor Community Clinic and our patients.


Dr. Sunkara, MD, PhD
Chief Medical Officer
Harbor Community Clinic

APPENDIX C: PATIENT CONSENT

California State University Fullerton Research Study Consent Form HSR-18-19-657

Study Title: Identifying barriers within a Medically Underserved Population to address appointment non-compliance and decrease no-show rates in an outpatient primary care clinic setting

Researchers: Gabriella Garza, FNP

Team Chair: Deanna Jung, FNP, DNP

You are being asked to take part in a research study carried out by Gabriella Garza, FNP. This consent form explains the research study and your part in it if you decide to join the study. Please read the form carefully, taking as much time as you need. Ask the researcher to explain anything you don't understand. You can decide not to join the study. If you join the study, you can change your mind later and leave the study at any time. There will be no penalty or loss of services or benefits if you decide to not take part in the study.

What is this study about?

- This research study is being conducted to better understand the psychosocial and economic barriers affecting patient appointment compliance.
- You are being asked to take part because you are a patient within the clinic and your input is valuable and will be considered to improve care in the future.
- Taking part in the study will take about 1-5 minutes.
- You cannot take part in this study if you are under 18 years of old, involved in any other research study at this time, or if you have no interest in participating in this study.

What will I be asked to do if I am in this study?

If you take part in the study, you will be asked to complete the Barriers to Health Care Questionnaire. The questionnaire has 10 questions that aim to identify barriers to your healthcare.

Questions such as "Are you homeless?" are the most sensitive questions you will be asked.

If at any time you feel uncomfortable participating in this study, you may choose not to answer a question or ask the provider to stop the interview.

Your results will be recorded directly on the questionnaire or an electronic version of questionnaire.

Your privacy will be protected at all times. The use of your medical record number will be the only identifying information. Private health information will not be utilized.

Are there any benefits to me if I am in this study?

The potential benefits to you for taking part in this study include you having more access to resources and medical care.

If you take part in this study, you will help other people in your community by helping clinic providers understand the best way to improve health outcomes in a medically underserved population.

Are there any risks to me if I am in this study?

The only potential risks from taking part in this study is the potential discomfort from having to share your current life situation and barriers.

You should know that your emotional well-being is highly important. If you feel uncomfortable with any of the questions, feel stress or anxiety, or sadness, you can be referred to a licensed mental health provider for counseling.

Will my information be kept anonymous or confidential?

The data for this study will be kept confidential to the extent allowed by law. No published results will identify you, and your name will not be associated with the findings. Under certain circumstances, information that identifies you may be released for internal and external reviews of this project within the clinic setting for provider private conversations for follow-up and continued treatment only.

All health data will be kept in a locked filing cabinet. I will only have access to the data.

The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous.

The data for this study will be kept indefinitely for future educational use and presentation at conferences, and for publication. The findings for this study will be impactful for continued and future use.

You will not receive money or any other form of compensation for taking part in this study.

Who can I talk to if I have questions?

If you have questions about this study or the information in this form, please contact the researcher at ggarza@pickharbor.org or 310-321-4389. If you have questions about your rights as a research participant, or would like to report a concern or complaint about this study, please contact the Institutional Review Board at (657) 278-7719, or e-mail irb@fullerton.edu.

What are my rights as a research study volunteer?

Your participation in this research study is completely voluntary. You may choose not to be a part of this study. There will be no penalty to you if you choose not to take part. You may choose not to answer specific questions or to stop participating at any time.

What does my signature on this consent form mean?

Your signature on this form means that:

- You understand the information given to you in this form
- You have been able to ask the researcher questions and state any concerns
- The researcher has responded to your questions and concerns
- You believe you understand the research study and the potential benefits and risks that are involved.

Statement of Consent

I have carefully read and/or I have had the terms used in this consent form and their significance explained to me. By signing below, I agree that I am at least 18 years of age and agree to participate in this project. You will be given a copy of this signed and dated consent form to keep.

Name of Participant (please print) _____

Signature of Participant _____ Date _____

Signature of Investigator _____ Date _____

Fullerton de la Universidad Estatal de California
Formulario de consentimiento para el estudio de investigación de
HSR-18-19-657

Título del estudio: identificación de las barreras dentro de una población con escasos recursos para abordar el incumplimiento de la cita y disminuir las tasas de no presentación en una clínica de atención primaria para pacientes ambulatorios

Investigadores: Gabriella Garza, FNP

Presidenta del equipo de: Deanna Jung, FNP, DNP

Se le pide que participe en un estudio de investigación realizado por Gabriella Garza, FNP. Este formulario de consentimiento explica el estudio de investigación y su parte en él si decide unirse al estudio. Por favor, lea el formulario cuidadosamente, tomándose todo el tiempo que necesite. Pídale al investigador que le explique cualquier cosa que no entienda. Puedes decidir no unirse al estudio. Si se une al estudio, puede cambiar de opinión más tarde y abandonar el estudio en cualquier momento. No habrá penalización ni pérdida de servicios o beneficios si decide no participar en el estudio.

¿De que se trata este estudio?

- Este estudio de investigación se está llevando a cabo para comprender mejor las barreras psicosociales y económicas que afectan el cumplimiento del nombramiento del paciente.
- Se le pide que participe porque es un paciente dentro de la clínica y su opinión es valiosa y será considerada para mejorar la atención en el futuro.
- La participación en el estudio durará entre 1 y 5 minutos.
- No puede participar en este estudio si es menor de 18 años, está involucrado en cualquier otro estudio de investigación en este momento o si no tiene interés en participar en este estudio.

¿Qué me pedirán hacer si estoy en este estudio?

Si participa en el estudio, se le pedirá que complete el Cuestionario de Barreras a la Atención Médica. El cuestionario tiene 23 preguntas que apuntan a identificar las barreras para su atención médica.

Las preguntas más delicadas que le harán son preguntas como "¿Tiene acceso a un refugio?".

Si en algún momento se siente incómodo al participar en este estudio, puede elegir no responder una pregunta o pedirle al proveedor que detenga la entrevista.

Sus resultados se registrarán en el cuestionario o en una versión electrónica del cuestionario.

Su privacidad estará protegida en todo momento. El uso de su número de registro médico será la única información de identificación. No se utilizará información privada de salud.

¿Hay algún beneficio para mí si estoy en este estudio?

Los beneficios potenciales para usted por participar en este estudio incluyen que tenga más acceso a recursos y atención médica.

Si participa en este estudio, ayudará a otras personas en su comunidad ayudando a los proveedores de la clínica a comprender la mejor paga para mejorar los resultados de salud en una población que no recibe atención médica.

¿Hay algún riesgo para mí si estoy en este estudio?

Los únicos riesgos potenciales de participar en este estudio son las posibles molestias de tener que compartir su situación actual de la vida, las barreras o el estado de salud mental.

Debes saber que tu bienestar emocional es muy importante. Si se siente incómodo con alguna de las preguntas, siente estrés, ansiedad o tristeza, puede ser referido a un proveedor de salud mental con licencia para que lo asesore.

¿Se mantendrá mi información anónima o confidencial?

Los datos para este estudio se mantendrán confidenciales en la medida que lo permita la ley. Ningún resultado publicado lo identificará y su nombre no se asociará con los hallazgos. Bajo ciertas circunstancias, la información que lo identifica puede ser divulgada para revisiones internas y externas de este proyecto dentro del entorno de la clínica para conversaciones privadas de proveedores para seguimiento y tratamiento continuo únicamente.

Todos los datos de salud se guardarán en un archivador cerrado. Solo tendré acceso a los datos.

Los resultados de este estudio pueden publicarse o presentarse en reuniones profesionales, pero las identidades de todos los participantes de la investigación permanecerán en el anonimato.

Los datos para este estudio se mantendrán indefinidamente para uso educativo futuro y presentación en conferencias, y para publicación. Los hallazgos de este estudio serán impactantes para el uso continuo y futuro.

No recibirá dinero ni ninguna otra forma de compensación por participar en este estudio.

¿Con quién puedo hablar si tengo preguntas?

Si tiene preguntas sobre este estudio o la información en este formulario, comuníquese con el investigador en ggarza@pickharbor.org o al 310-321-4389. Si tiene preguntas sobre sus derechos como participante de una investigación, o si desea informar una inquietud o queja sobre este estudio, comuníquese con la Junta de Revisión Institucional al (657) 278-7719, o envíe un correo electrónico a irb@fullerton.edu.

¿Cuáles son mis derechos como voluntario de investigación?

Su participación en este estudio de investigación es completamente voluntaria. Puede elegir no ser parte de este estudio. No habrá penalización para usted si decide no participar. Puede elegir no responder preguntas específicas o dejar de participar en cualquier momento.

¿Qué significa mi firma en este formulario de consentimiento?

Su firma en este formulario significa que:

- Usted entiende la información que se le da en este formulario
- Usted ha podido hacer preguntas al investigador e indicar cualquier inquietud
- El investigador ha respondido a sus preguntas e inquietudes
- Usted cree que comprende el estudio de investigación y los posibles beneficios y riesgos que implica.

Declaración de consentimiento

He leído atentamente y / o me han explicado los términos utilizados en este formulario de consentimiento y su significado. Al firmar a continuación, acepto que tengo al menos 18 años de edad y acepto participar en este proyecto. Se le entregará una copia de este formulario de consentimiento firmado y fechado para que lo conserve.

Nombre del participante (en letra de imprenta) _____

Firma del participante _____ Fecha _____

Firma del investigador _____ Fecha _____

APPENDIX D: BHQ CERTIFICATION OF TRANSLATION



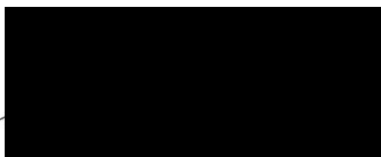
The Spanish Group LLC
 1 Park Plaza, Suite 600
 Irvine, CA 92614
 United States of America
<https://www.thespanishgroup.org>

Certified Translation

Furnished on the **7th** day of **May, 2019**

I, Salvador Ordorica, as a Quality Assurance Agent of The Spanish Group LLC, hereby attest as an authorized representative of The Spanish Group, I verify that I have proofread this document and I certify that the attached document is a faithful and authentic of its original. This translation is adequate for an 8th grade readability level.

Respectfully,



Salvador G. Ordorica
The Spanish Group LLC
(ATA #267262)

The Spanish Group LLC verifies the credentials and/or competency of its translators and the present certification, as well as any attached pages, serves to affirm that the document(s) enumerated above has/have been translated as accurately as possible from its/their original(s). The Spanish Group LLC does not attest that the original document(s) is/are accurate, legitimate, or has/have not been falsified. Through having accepted the terms and conditions set forth in order to contract The Spanish Group LLC's services, and/or through presenting this certificate, the client releases, waives, discharges and relinquishes the right to present any legal claim(s) against The Spanish Group LLC. Consequently, The Spanish Group LLC cannot be held liable for any loss or damage suffered by the Client(s) or any other party either during, after, or arising from the use of The Spanish Group LLC's services.

APPENDIX E: BARRIERS TO HEALTH QUESTIONNAIRE

Barriers to Health Questionnaire Adapted From the HRSN from CMS

QUESTION	YES	NO	<i>Internal Use Only</i> Comments
1. Is language a barrier to your care?			
2. Is reliable transportation a barrier to your care?			
3. Within the past 12 months, have you had difficulty accessing food or clean water?			
4. Do you have childcare issues?			
5. Are you unemployed?			
6. Are you homeless?			
7. Do you have insurance?			
8. Can you afford healthcare costs for medication, copays, or therapies?			
9. Can you be reached by telephone?			
10. Has scheduling conflicts caused you to cancel your clinic appointments?			

A response of "yes" from Question 1 to 10 requires follow up from a Case Manager

CLINIC USE ONLY <i>Chart Review</i>	Yes	No
Did the patient get referred to the Case manager?		
Did the Case Manager meet with the patient or address the patient's barrier (s)?		
Did the patient adhere to the next scheduled appointment?		

Cuestionario de Barreras a la Salud Adaptado de la HRSN de CMS

PREGUNTA	Sí	No	<i>Solo Para Uso Interno</i> Compromisos
1. ¿Es el lenguaje una barrera para su cuidado?			
2. ¿El transporte confiable es una barrera para su cuidado?			
3. ¿En los últimos 12 meses, ¿ha tenido dificultades para acceder a alimentos o agua limpia?			
4. ¿Tiene problemas de cuidado de niños?			
5. ¿Está usted desempleado?			
6. ¿Es usted sin hogar?			
7. ¿Tiene seguro?			
8. ¿Puede pagar los costos de atención médica para medicamentos, copagos o terapias?			
9. ¿Se le puede contactar por teléfono?			
10. ¿Los conflictos de programación han provocado que cancele sus citas clínicas?			

Una respuesta de "sí" de las preguntas 1 a 10 requiere un seguimiento al administrador de casos

SOLO PARA USO CLÍNICO <i>Resumen de la tabla</i>	Sí	No
¿El paciente fue referido al administrador de casos?		
¿Se reunió el administrador de casos con el paciente o abordó la (s) barrera (s) del paciente?		
¿Se adhirió el paciente a la próxima cita programada?		