Implementing a Community Education Campaign to Improve Prenatal Care Among Navajo Women

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Abstract

Early and consistent prenatal care (PNC) is essential to preventing adverse maternal and neonatal outcomes. Despite the recommendations made by the World Health Organization and the American College of Obstetricians and Gynecologists, childbearing women with health disparities living in rural settings are at an increased risk of experiencing inadequate PNC compared to their urban counterparts. The literature search suggests that limited access to PNC, childcare during the PNC visit, health care provider's perceptions of patients, and provider mistrust are barriers to early and consistent PNC. Growing research is placing a call to health care providers to implement interventions that are culturally sensitive using health literacy. Navajo childbearing women with health disparities living in rural Arizona are reflective of the childbearing women with health disparities globally. A quality improvement project using an eight week community based education campaign was conducted focusing on improving patient health literacy regarding early and consistent PNC, increasing the number of PNC visits, and reducing preventable harm to Navajo women receiving PNC services in a rural Northern Arizona health care setting. The results demonstrate the need for improved culturally-based health literacy regarding preventative health seeking behaviors. The eight week community based education campaign did not have a significant impact on the number of PNC visits. Future research is needed in order to determine the correlation between health literacy and the number of PNC visits.

Keywords: prenatal care, health disparities, rural setting

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Prenatal care (PNC) is important in identifying risk factors for adverse pregnancy outcomes and consistent follow up during pregnancy enables effective management in order to improve maternal and neonatal health outcomes (Beeckman, Louckx, & Putman, 2012). According to Wingate, Barfield, Smith and Petrini (2015), *Healthy People 2020* and the National Prevention Council have identified that the delivery of early and consistent PNC is associated with better health outcomes among childbearing women with health disparities living in rural or underserved areas. The American College of Obstetrics and Gynecologists (ACOG), (2014) and the World Health Organization (WHO), (2010) agree that early and consistent PNC is a crucial factor in improving maternal and neonatal health outcomes. Native American women are less likely to initiate PNC in the first trimester and to seek ongoing PNC after initiation, which often causes various health disparities (Center of Disease Control and Prevention [CDC], 2015).

Project Description

Hornbuckle et al. (2017) define "health disparities" as a comprehensive term to describe health inequities based on multiple factors including geography, socioeconomic status (SES), race/ethnicity, age, and gender. Health disparities in PNC affect women on local, national, and global levels. ACOG (2014) has determined that significant health disparities exist between rural and urban women. In rural settings, childbearing women with health disparities experience poorer maternal and fetal outcomes and have less access to health care compared to urban women (ACOG, 2014; Wingate, Barfield, Smith, & Petrini, 2015). ACOG (2014) recommends a minimum of seven PNC visits throughout pregnancy. According to the Arizona Department of Health Services (2015), 61 percent of Native American women are receiving early and consistent PNC beginning in the first trimester. The *Healthy People 2020* goal for women to receive early

and consistent PNC is 77.9 percent. The CDC (2015) reports the percentage of preterm births among Native American women is 13.1 percent compared to 10.2 percent of preterm births among Non-Hispanic Caucasian women. According to the *Data USA Report* (2016), the Navajo population in Winslow, Arizona is 28.9 percent of the total population consisting of approximately 9,600 people. The *Data USA Report* (2016) further states that childbearing females between the ages of 18 and 24 are the largest demographic living in poverty in Winslow, Arizona. The Winslow Indian Health Care Center (WIHCC) percentage of Navajo women receiving early and consistent PNC is 60.8 percent which is well below the *Healthy People 2020* goal of 77.9 percent. Historically, WIHCC encouraged patients to seek PNC services by offering classes and information was limited to the clinic campus.

Available Knowledge

Larsen, Exavery, Philips, Tani, and Kante (2016) agree with the recommendation by WHO (2010) that states early and consistent PNC will improve maternal and fetal outcomes. According to Larsen et al. (2016), it is widely accepted that if pregnant women receive early and consistent PNC, their chances of reducing maternal and fetal morbidities from a preventable cause are significantly increased. The clinical question that steered this search for evidence was: *In a rural, women's health care setting, what barriers to effective PNC exist?* The literature review sought to recognize the existing barriers to early and consistent PNC and identify current culturally specific interventions to Navajo childbearing women with health inequities living in rural, off-reservation communities.

Sources and Literature Search Process

The clinical question guided a comprehensive literature search using the following key words, *prenatal care, health disparities,* and *rural setting*. The search strategy and process

focused on identifying systematic reviews, practice guidelines, and individual research studies that provided the best available evidence related to the effectiveness of early and consistent PNC on childbearing women with health disparities living in a rural setting (Lo-Biondo-Wood & Haber, 2010). The search process began by conducting a broad literature search of research studies focusing on the general topics of health disparities, and PNC. The literature search was reduced to include research studies that concentrated on childbearing women living in a rural setting. The database search included Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE/PubMed and British Medical Journal (BMJ) Clinical Evidence. These databases were selected based on suggestions by the Cline librarian, textbook references, and the clinical question. CINAHL and MEDLINE/PubMed yielded research studies from professional journals focusing on nursing, allied health, medicine, clinical interventions, and health care services. BMJ Clinical Evidence contained systematic reviews assessing the benefit and harms of treatments and provided a global perspective in answering the clinical question. The headings and keywords for all searches comprised three main constructs: (a) prenatal care and health disparities, (b) rural setting and health disparities, and (c) prenatal care and rural settings. All searches had general limiters which included time frame, report-type (academic journal, full-text), and publication language (English). The searches in CINAHL and MEDLINE/PubMed databases were limited to five years. The BMJ search used 2000-present as the time frame. This search resulted in 132 citations and two guidelines as follows: CINAHL, 63 citations; MEDLINE/PubMed, 69 citations; and WHO and ACOG, two guidelines. Titles and abstracts of the 132 articles and two guidelines were carefully reviewed for relevance according to the following inclusion criteria: (a) childbearing women with health disparities receiving PNC; (b) over the age of 18; (c) singleton gestation; and (d) living in a rural setting. Exclusion criterion

was (a) under the age of 18; (b) multiple gestation; and (c) uncontrolled morbidities such as diabetes and hypertension. ACOG (2014) defines gestation as the process of carrying or being carried in the womb between conception and birth over a period of time. The factors in the exclusion criteria would bias the results of the literature search by increasing the number of PNC visits due to age, management of high risk pregnancy and uncontrolled morbidities. If a particular study met all initial criteria, full-text was retrieved and evaluated to determine final eligibility.

The studies were retained based on meeting the inclusion criteria of the articles using random controlled trials (RCTs), systematic reviews, meta-analysis, and descriptive comparative designs to discuss existing barriers and interventions to effective PNC to childbearing women living in a rural setting. The articles were critically evaluated focusing on the strengths and weakness and level of research evidence of the study methodology. The searches of each database yielded varying results. The details of these searches are listed below."

The CINAHL search produced 63 articles using the key terms *health disparities* AND *prenatal care*. The search was filtered for English language only, and peer reviewed. The filter for *within the last five years* was added, which narrowed the number from 63 to 30 articles. The additional filter of *rural* further reduced the number of articles to three, which was too limiting and therefore was removed. The titles and abstracts of the 30 articles were reviewed. The articles were limited to the following inclusion criteria: childbearing women above 18 years of age with health disparities receiving PNC in underserved areas. A list of 20 articles was printed to be reviewed in their entirety. A total of eight articles were retained.

The MEDLINE/PubMed search included the key terms *prenatal care* AND *health disparities* AND *rural* AND *United States* filtered for the last five years, English language only

and the inclusion criteria listed above in the CINAHL search were used to conduct the initial search. The initial search yielded 69 articles. Titles and abstracts of 38 articles were reviewed and articles were excluded if the article did not provide information pertinent to answering the clinical question The MEDLINE/PubMed search differed from the CINAHL search by including information about health disparities impacting PNC specific to the United States. After the exclusion process, 10 articles were printed for further review. Two articles were retained. There were 3 duplicates noted between the CINAHL and MEDLINE/PubMed searches.

The BMJ Clinical Evidence search used the key terms *prenatal care* AND, *health disparities* AND *rural* were used for the first search. This search did not provide relevant information. The second search used the terms *pregnancy* AND *adverse outcomes* AND *rural.* This search provided 39 guidelines regarding preventing preterm deliveries and prenatal care. The guidelines were reviewed and excluded based on not meeting inclusion criteria such as multiple gestation pregnancies and not in a rural setting. The addition of filters English language only, and childbearing women over the age of 18 did not produce any further information. No guidelines were retained. An initial search in the Cochrane Library using the search terms *prenatal care* AND *health disparities* AND *rural* produced one study. The title and the abstract was reviewed and articles were excluded if the age of publication was greater than five years. The BMJ Clinical Evidence search differed from the previous searches by providing the advantages and disadvantages of global PNC treatments and guidelines. The MEDLINE/PubMed provided two of the retained studies, and CINAHL provided the remainder of the retained studies. This process resulted in the ten relevant studies shown in the evaluation table (See Appendix A, Evaluation Table of Retained Studies).

Synthesis of the Literature

The findings produced by the literature search concentrate on identifying barriers to early, consistent PNC which included lack of access to PNC, patient knowledge deficit, and patient-provider mistrust; encouraging evidence-based best practices for PNC; and promoting patient empowerment through culturally specific interventions to educate patients. Munro, Dahlem, Lori, and Martyn (2012) and Reeve, Banfield, Thomas, Reeve, and Davis (2015) conclude that the importance of increased access to PNC to improve maternal and child health outcomes, particularly in disadvantaged groups, has been described both nationally and internationally. The literature supports the need for increased awareness of the benefits associated with early and consistent PNC through improved health literacy. The identification of barriers to PNC and culturally sensitive interventions could provide guidance in improving the relationship between health promotion/disease prevention behavior and the initiation of early and consistent PNC. According to Munro et al. (2012), there is a strong need for health care providers to further access and discuss sensitive issues within a population marked by health disparities, lower education, and SES levels. There is a strong consensus that health care providers develop and implement interventions specific to the needs of the rural population (Bloom, Bullock, & Parsons, 2012; Munro et al., 2012; Reeve et al., 2016). The literature search also reveals gaps regarding interprofessional education and training of health care providers to address the barrier of patient-provider communication (Munro et al., 2012). The authors agree there is a general lack of community health services that are culturally appropriate.

Rationale

Health literacy is defined as the ability to obtain, process, and understand basic health information and services needed to make appropriate health decisions (Geiermann, Begay, Robinson, & Rodriguez, 2016). Health literacy is a precursor to health and achievement of a

culture of health. Patient empowerment, engagement, activation, and maximized health outcomes will not be achieved unless assurance of health literacy is applied universally for every patient, every time and across all environments of care (Loan et al., 2018). Low or inadequate health literacy has been linked to numerous poor health outcomes, such as increased stillbirths, and pre-term births due to inadequate PNC (Kilfoyle, Vitko, O'Conor, & Bailey, 2016).

A conceptual framework creates a mental structure that guides a research project, provides a connection between theory and real world patient experiences, and advances the knowledge of the researcher through new discoveries. The conceptual framework used to guide this descriptive study is *The Navajo Wellness Model*. This model integrates the traditional ways of Navajo teachings with how one approaches daily health: through exercise, healthy eating, and maintaining a balance in all aspects of life – Ho'zho' – which is in accordance with the daily natural cycles of dawn, day evening and nighttime (Kahn-John, 2015). Within the Navajo culture, childbirth is believed to be a normal, natural part of life. It is considered natural to endure the hardships and discomforts of pregnancy. For example, Navajo women would seek healthcare for bleeding but not for edema or excessive weight gain (Kahn-John, 2015). Kahn-John (2015) further explains that Ho'zho' is the complex wellness philosophy and belief system of the Dine' (Navajo) people, comprised of principles that guides one's thoughts, actions, behaviors, and speech, which encompasses preventative health seeking behavior, such as PNC services. The concept of Ho'zho' is an essential component of *The Navajo Wellness Model*. According to Kahn-John (2015), Ho'zho' encompasses both a way of living and a state of being. It expresses for the Navajo such concepts as the words *beauty, perfection, harmony, respect, spirituality, goodness, and wellbeing.* Ho'zho' offers key elements of the moral and behavioral conduct necessary for a long healthy life, placing an emphasis on the importance of health-

seeking behaviors by developing pride of one's body, mind, soul, spirit, and honoring all life (Kahn-John, 2015).

A theoretical framework can serve as the foundation to guide the collection of data to measure the change in a population (Zaccagnini & White, 2017). *Kotter's 8 Step Process for Leading Change Model* provides a useful approach to leading a community change and managing projects effectively. The eight steps consisting of: establishing a sense of urgency, forming a powerful coalition, creating a vision for change, communicating the vision, removing obstacles, creating short-term wins, consolidating improvements, and anchoring changes in corporate culture, establish a firm foundation to generate a sustainable change.

Quality improvement (QI) is a systematic, formal approach to plan and evaluate project interventions to increase community awareness of the advantages of early and consistent PNC. QI models present a systematic framework for establishing QI processes (Guidry, Vischi, Han, & Passons, 2001).The QI model framework that was used to direct this descriptive QI study is *The Mobilize, Assess, Plan, Implement, and Track (MAPIT) Framework* (See Appendix B, MAPIT Framework). The *mobilize* component of the framework allows the researcher to determine the mission and vision of the project, to identify and collaborate with community partners to increase community awareness of effective PNC. The *assess* component of the framework guides in understanding the community's needs in order to get a sense of what is realistic to accomplish. It also provides a foundation for considering the feasibility, effectiveness, and measurability of the project intervention. The development of a plan with clear objectives and the specific steps to achieve and manage them occurs in the *plan* stage of the framework. In the *implement* stage of the framework, project timelines with clear deadlines, and communication and work plans are developed. Lastly, the *track* stage of the framework concentrates on planning regular

interventions to measure and track the project's progress over time. It also focuses on project dissemination with the community, clinic and university (Guidry et al., 2001). A sound understanding of these concepts and frameworks are essential in the development of culturally specific education modalities, such as flyers and public service announcements. The goals of the education modalities are to promote the project aims of increasing community awareness of the benefits of early, consistent PNC, increase the number of PNC visits, and to encourage patient empowerment based on the principles of resiliency, self-respect, self-identity, and self-care.

Specific Aims

The purpose of this paper is to use health literacy by incorporating *The Navajo Wellness Model* to develop, implement, and evaluate a culturally specific education campaign designed to improve community awareness of the benefits of early and consistent PNC, promote self-empowerment, and increase the number of PNC visits among Navajo women receiving PNC services in a rural, off reservation setting. This paper will provide a review of the project, identify and address the clinical question. Lastly, this paper will demonstrate a clear explanation of the methods, analysis, ethical considerations, and discuss the results produced by the project intervention.

Context

It is important to examine community and health care provider perceptions regarding the importance of early and consistent PNC in order to develop a culturally appropriate, sustainable community educational campaign that will encourage the empowerment of Navajo women and increase the number of early and consistent PNC visits. The setting used to conduct this quality improvement project is WIHCC. WIHCC is a primary care outpatient clinic in Winslow, Arizona dedicated to serving the health care needs of the local and regional Native American, specifically

Navajo, population. The clinic consists of family practice, women's health, pediatric, and emergency services. This quality improvement project focused on reaching the Navajo women receiving routine PNC in the women's health clinic. The following guidelines are measured by gestation. The guidelines for routine PNC are one visit every four weeks until 28 weeks gestation, then one visit every two weeks from 28 weeks to 36 weeks gestation, followed by weekly visits from 36 weeks to 40 weeks gestation (ACOG, 2014).

Participants

This descriptive, QI project focused on implementing a community intervention on the Navajo population living in off reservation communities in Winslow, Arizona. The impact of the community intervention was evaluated by determining the number of PNC visits in the charts of Navajo women pre and post-community intervention. The PNC charts of Navajo women were eligible if they were between the ages of 18 to 34, had a singleton pregnancy, a body mass index (BMI) less than 40, and controlled gestational diabetes and hypertension. The charts of Navajo women were excluded from the project if they had a multiple gestation pregnancy, used tobacco products, illicit drugs, were drinking alcohol or had uncontrolled medical conditions, such as diabetes or hypertension.

A PNC barrier assessment was conducted in order to identify the community's needs and resources. The community and health care providers were surveyed regarding their perceptions of barriers to early and consistent PNC. Health care providers were eligible if they possessed a graduate degree with board certification.

An anticipated project and setting variable consists of the health care providers willingness to participate in the project related to their perception that participation in the project might "slow them down" and decrease clinical production time. Early identification and

education of stakeholders, and champions can help to mitigate these variables. Kotter (2012) explains that by "creating a sense of urgency" and "building a guiding coalition," stakeholders and champions can function as change agents. This can be achieved by improving the quality of delivery and number of PNC visits through following the established PNC guidelines. This can also result in "enabling actions by removing barriers" and "generating wins" for the community, patients, and health care providers, such as decreased patient-provider mistrust.

According to Guidry et al. (2001), the *mobilize* phase of *The MAPIT Framework* consists of determining the vision and mission of the coalition. This phase focuses on creating a list of potential settings, such as WIHCC, and community partners to join the coalition. Key stakeholders from WIHCC were identified. The key stakeholders consisted of the Navajo traditional medicine practitioner, the directors of maternal child and PNC services and the public health nursing department. The directors of the prenatal and maternal-child units were excited about the possibilities this project could generate and provided their support as primary sponsors for this descriptive, QI project. This mobilization process began with gaining trust and respect from key organizational stakeholders, such as, members from the Board of Directors, Executive Committee, and medical staff through attending multiple meetings, and giving three presentations outlining the feasibility, effectiveness, and relevance of the project to WIHCC's mission statement (See Appendix C, approval letters from WIHCC).

After consulting with the President of Native American Affairs at Northern Arizona University (NAU), a letter was sent to the Navajo Human Research Review Board notifying them of this descriptive, QI project as a courtesy since the project was conducted off reservation in the community of Winslow, Arizona. A dissemination of the project findings will be presented to the Executive Committee, and Board of Directors at WIHCC upon completion of the project.

A nursing colleague of Navajo ancestry was identified as a key partner to discuss project collaboration which included input regarding cultural sensitivity of the educational modalities used in the community education campaign.

Intervention

This descriptive, QI project began with a written proposal outlining project aims, interventions, planning and evaluation of project outcomes followed by a project presentation to the university. Initiation of the *assess* phase of *The MAPIT Framework* focused on collecting a baseline needs assessment to determine the community's unique needs and working with the coalition to set priorities.

Before collecting any information or collaborating with key organizational stakeholders, the initiation of the institutional review board (IRB) process was implemented. The project sought exemption status since the project was classified as a descriptive, QI study. The project received an expedite approval status because the project focused on a vulnerable population, such as pregnant women of Navajo ancestry. In order to receive approval status from the IRB, information regarding the PNC barrier assessment, such as surveys with consent forms, limited data set , flyer information, correspondence with the Native-American Initiatives from the university, project timeline, and approval letters from WIHCC were submitted for review and approval (See Appendix D, Approval Letter from IRB).

The project sought to collect information from the community members and healthcare providers working or receiving care from WIHCC. The healthcare providers and members from the community were asked, via a written survey, to rank "barriers to PNC" in order of perceived importance. These barriers included lack of access/transportation, patient knowledge deficit, patient-provider mistrust, teen pregnancy, tobacco, alcohol, illicit drug use, intimate partner

violence, and mental health. Pre-intervention community surveys were handed out to members of the community on Mondays and Thursdays from 0800 to 1700 for two weeks by members of the survey team which included health care providers working in the prenatal clinic, public health nurses, and members from the health promotion/disease prevention team. The pre-intervention health care provider surveys were distributed daily for two weeks to health care providers, working in the PNC, clinic by the director of PNC services (See Appendix E for Community, and Appendix F for Health Care Provider Surveys).

A total of 30 community surveys were collected (ten from community event and 20 from WIHCC) and 12 healthcare provider surveys were collected. Some barriers to the collection of pre-intervention surveys included disinterest and mistrust from the community members, difficulty with understanding how to rank barriers from the community, and pushback from some of the healthcare providers. The barriers were mitigated by having the staff sit with the patients while they completed the surveys in case they had questions or concerns. A ten minute in-service explaining the project and its aims was given to the healthcare providers on the third day after surveys were distributed resulting in an improved survey completion response.

Additional baseline information was collected by completing a community barrier assessment in order to determine what barriers to PNC exist specific to Winslow, Arizona. This was accomplished by conducting ride along visits with public health nurses assigned to off reservation communities, speaking with social workers, and staff/students from the local community college and hospital over two weeks. According to Guidry et al. (2001), the *assess* component of *The MAPIT Framework* encourages the collection of baseline information before initiating the project intervention because it allows for tracking of the project's progress The data

from the health care provider and community surveys were compiled and placed on a graph for future evaluation (See Appendix G, Perception of Community verses Healthcare Providers).

Prior to the implementation of the community education campaign to promote early and consistent PNC, a pre-intervention chart review from prenatal charts dated from November 2017-January 2018 of 50 prenatal charts was completed over two days. The data collected focused on a limited data set in order to comply with the Health Insurance Portability and Accountability Act (HIPAA) regulations after obtaining receipt of clearance from WIHCC and was compiled on an Excel spread sheet. The limited data set information included, age, zip code, number of PNC visits from the initiation of PNC to delivery or transfer from facility, educational level, social and medical history. (See Appendix H, Limited Data Set from Pre and Post-Intervention Chart Review).

The *plan* phase of *The MAPIT Framework* consists of the development of an intervention that has a potential for a broad reach, high impact and culturally specific to the community (Guidry et al., 2001). The educational modalities such as , the flyer and a two minute public service announcement, were developed using *The Navajo Wellness Model* after collaborating with the nurse colleague and the Navajo traditional medicine practitioner to ensure authenticity and accuracy of Navajo culture. The flyer incorporated the philosophy of Hoz'ho' focusing on the central themes of *respect: gift of self, harmony: relationships, and spirituality: prayer* with evidence-based practice guidelines supported by ACOG and WHO, which include, the importance of establishing early, consistent PNC with healthcare providers, and addressing the PNC barrier of patient-provider mistrust through initiating communication with healthcare providers. The flyer was completed in three days. The goal of the flyer was to improve PNC health literacy using the concept of Ho'zho' to encourage patient empowerment through

resiliency, self-care, self-identity, and self-respect, and to increase the number of PNC visits (See Appendix I, Community Flyer). Staff and pharmacists from the local Safeway and Walmart stores were notified of the project and the project aims and agreed to distribute the flyers as part of the community education campaign. The flyer was distributed to the community PNC and flu clinics, and during Halloween events.

The *implement* stage of *The MAPIT Framework* involves creating a detailed work plan that includes concrete action steps with clear deadlines and time frames (Guidry et al., 2001). The implementation stage of the descriptive, QI project centered on the initiation of an 8 week education campaign that started November 20, 2018. The education campaign focused on increasing community awareness of the benefits of early and consistent PNC through the distribution of flyers throughout the community. The educational campaign also included a two minute public service announcement that aired on the local radio station, KTNN and the text from the public service announcement was placed in the local newspaper weekly starting December 2, 2018. Lastly, the *tracking* component of *The MAPIT Framework* focused on monitoring bi-weekly for barriers or successes related to the community reading the flyer or hearing the radio spot. The impact of the intervention was monitored post-intervention through the retrospective prenatal chart review from November, 2018 through January, 2019 to determine if there was an increase in the number of PNC visits. The education campaign was a new approach to encourage patients to seek early and consistent PNC. The education campaign sought to increase community awareness of the benefits of early and consistent PNC and was focused on identifying and capturing the attention of the community members that do not come to the clinic to seek PNC. The education campaign aligned with the mission of WIHCC which is

to provide quality healthcare to the community they serve by meeting the patients where they are in a manner in which they can understand.

Study of the Intervention

Health literacy is thought to impact women's reproductive health. Given the significance of low health literacy on the healthcare system, emphasis has been placed on identifying and addressing this modifiable risk factor to improve patient-provider interaction and improve health outcomes (Kilfoyle et al., 2016). Low health literacy, cultural barriers, and limited English proficiency have been coined as a "triple threat" to effective health communication (Singleton & Krause, 2009). This is unfortunate as health literacy is likely to impact the many facets of reproductive health care. Knowledge about healthy pregnancy, post-partum behaviors, and preventative care is important to keep women healthy and leading productive lives (Kilfoyle et al., 2016). The approach chosen for assessing the impact of the community education campaign was conducting a retrospective review of the prenatal charts pre and post-intervention in order to determine if there was an increase in the number of PNC visits resulting from the distribution of flyers and public service announcements to the community.

The flyer demonstrated cultural relevance through its combination of the many characteristics of the philosophy of Ho'zho' in *The Navajo Wellness Model*, such as *respect: gift of self, harmony: relationships, and spirituality: prayer* with the three trimesters of pregnancy. ACOG (2014) defines a trimester of pregnancy as 12-14 weeks or three months gestation. In the first trimester of pregnancy, the flyer encourages the Navajo woman to establish a relationship with the health care provider to improve maternal and fetal outcomes. The Navajo connectedness to family, clan, tribe, and community is a central theme, requiring a constant awareness of the relationships and interconnectedness between self and the environment (Kahn-John, 2015). The second trimester of pregnancy captures the concept of harmony by promoting relationship between the mother and her

baby through *self-care*, such as healthy eating and exercise. Harmony or reciprocity represents the graceful and respectful exchange and receipt of support and tokens of honor–nothing is ever received without the characteristic of generosity (Kahn-John, 2015). Finally, the third trimester of pregnancy explores spirituality through encouraging a partnership with the Navajo traditional medicine practitioner to maintain spiritual health and pray for a healthy birth. Spirituality represents the expectation to respect and honor spirit through prayer, paying homage to spirit, ritual ceremony and religious practices (Kahn-John, 2015). The nursing colleague of Navajo ancestry reviewed the contents of the flyer to ensure the flyer accurately represented the key concepts of *The Navajo Wellness Model* and was written in a language level which could be understood by all members of the Navajo community. She emphasized the importance of combining the core concepts of *The Navajo Wellness Model* with information to improve maternal and fetal outcomes. The author of the project learned some words in Navajo in order to better understand how to develop the information on the flyer such as, "Sha'bek'ehgo As'ah Ooda'a't" which means "A journey with wellness and healthy lifestyle guided by the journey of the sun."

The post-intervention review of the prenatal charts revealed a decrease in the number of PNC visits. There is no valid approach to establish whether the decrease in the number of PNC visits were due to the community education campaign. The information from the flyer was used to incorporate culture and health literacy to encourage a change in health seeking behavior among the members of the community that were not currently receiving early and consistent PNC. This activity helped to promote a sense of teamwork and promoted a sense of community engagement. The survey team implemented the steps of *The Kotter's 8 Step Process for Leading Change Model* to "communicate the vision, create short-term wins, and build on the potential for change" Step six of *Kotter's 8 Step Process for Leading Change Model* concentrates on "creating short-term

wins." According to Kotter (2012), this step is predicated upon generating and making visible success as soon as possible. It is critical to drive short-term wins in any long-term change effort. The short-term wins generated by this project were to improve the community's awareness of the advantages of early, consistent PNC and to generate community interest in learning more about how to use themes from *The Navajo Wellness Model* to promote resiliency, and self-care through harmony and spirituality. Step seven of *Kotter's 8 Step Process for Leading Change Model* focuses on consolidating gains and producing more incremental change. The implementation of step seven of *Kotter's 8 Step Process for Leading Change Model* helped to keep the intervention in the forefront and to provide members of the survey team with reminders of the importance of promoting early and consistent PNC within the community. Through assessing the need for change through the barrier assessment, it revealed that both health care providers and the community members were interested in quality PNC and increasing the number of PNC visits. The survey teams and the author met bi-weekly to measure the impact of the community education campaign.

Costs Associated with the Intervention

According to Harris, Roussel, Dearman, and Thomas (2016) and the National Institute of Allergy and Infectious Diseases (2017), direct cost of the project are costs that can be directly linked or assigned to a specific research project and consist of line items as equipment, personnel, and travel. The authors further explain that indirect cost are infrastructure cost that are not directly related to the project and the organization as a whole such as, lights, telephone, and office space. Examples of direct cost that were associated with the implementation of this descriptive, QI project were the cost of traveling to and from the site, and the printing cost of the community flyer, use of the computer, office space and lights. Lastly, home and university

computers were used to construct the deliverables thus decreasing the cost associated with this project. Indirect costs were addressed by speaking with the directors of the prenatal and maternal-child clinics regarding the best days and times to use lights, computers and office space. The impacts of this project's indirect cost on the system included increased costs associated with the use of resources.

Measures

The research design used for this descriptive, quality improvement project was a descriptive mixed method. The sampling approaches used for this scholarly project were purposive and criterion sampling. Moser and Korstjens (2018) define purposive sampling as a selection of participants based on the researcher's judgment about which potential participants will be most informative. Criterion sampling consists of a selection of participants who meet pre-determined criteria of importance (Kim & Mallory, 2014). These sampling approaches were best suited and were superior compared to theoretical or snowballing approaches because they assisted the researcher in addressing the project aims and in answering the clinical question: *In a rural off reservation setting, what barriers to early, consistent PNC exist?* The main project aims were to increase the number of PNC visits, increase health literacy, empower patients to care for themselves, and to identify barriers to early and consistent PNC through a community barrier assessment. By implementing the purposive sampling approach, the researcher has the ability to collect data from participants that will be most informative. Criterion sampling was used in order to capture data that met pre-determined criteria of importance such as age, singleton pregnancy, controlled co-morbidities, exclusion criteria: multiple gestation, advanced maternal age, and uncontrolled co-morbidities.

Data collection methods are important, because of how the information collected will be used and what explanations the data can generate are determined by the methodology and analytical approach applied by the researcher (Paradis et al., 2016). The data collection method used for this project was survey/questionnaire. According to Paradis et al. (2016), surveys are ideal for documenting perceptions, attitudes, beliefs, or knowledge with a clear predetermined sample of individuals. Surveys and questionnaires are a superior method for data collection for my project. Due to the limitations of this project such as limited to off reservation sites only, the surveys were more effective and efficient in allowing the data to be collected in a timely manner.

A limitation of the survey/questionnaire method was that the instrument must be reliable and validated. The survey used was adapted from the Quality of Prenatal Care Questionnaire (QPCQ) using a 5 Likert scale with permission from Heaman et al. (2014). The QPCQ exists to measure the overall quality of PNC, and quality of care for six factors or subscales provided to women with health disparities living in rural and/or underserved communities. The QPCQ is a valid and reliable (i.e. Cronbach's alpha = 0.96) instrument that can be used as an outcome measure to evaluate quality of PNC. It identified predictors of quality of prenatal care, to compare and contrast quality of PNC across regions, populations, and types of health care providers. Finally, the QPCQ tool accessed the relationship between quality of care and a variety of maternal and infant health outcomes (Heaman et al., 2014).

The community and healthcare provider surveys were developed using key concepts from the QPCQ tool designed to ask patients their perceptions about the quality of PNC services they received. The community and healthcare provider surveys were narrowed to concentrate on the perceptions of PNC barriers ranking them in order of perceived occurrence. The steps and protocols associated with development and implementation of the data consisted of selecting

what data to measure, developing operational definitions, identifying data sources, and creating, implementing, and refining the data collection plan. The method selected for studying the outcomes of the intervention is *The MAPIT Framework.* The *track* phase of *The MAPIT Framework* concentrates on regular evaluations to measure and track processes and outcomes of the intervention being mindful of limitations such as, self-reported data, data quality, validity and reliability, and to determine if there is an increase in the number of PNC visits post-intervention.

Data Analysis

The selection of a data analysis approach is dependent on the purpose of the study, type of clinical question to be answered and the availability of resources (Ponto, 2015). The descriptive study approach impacts the method used for data analysis or evaluation. The goal of a descriptive study is to describe a phenomenon and its characteristics. Low inference, low assumption methods such as, measures of variation and measures of central tendency and basic frequency analysis, in the form of tables and graphs, were used to analyze the data after collection. Loeb et al. (2017) explain that good descriptive studies rely primarily on low-inference low assumption methods that use no or minimal statistical adjustments. Measures of central tendency are simple and compelling ways to describe and compare measures of interest in combination with measures of variation (Loeb et al., 2017). This approach revealed outcomes that provided the investigator with a better understanding of the relationship between perceived community education campaign and the number of PNC visits.

The number of PNC visits were counted pre and post-intervention, and bi-weekly over the eight week intervention with the goal of assessing for improvement. Post-intervention number of PNC visits were compared to pre-intervention number of PNC visits to ascertain the overall percentage rate of change. After conducting pre and post-intervention data collection,

there was not a significant change in the number of PNC visits. PNC visits decreased by 1.89 percent. The community education campaign revealed an increased need for culturally specific information to be distributed to on and off reservation communities to increase community awareness regarding the advantages of early and consistent PNC.

Ethical Considerations

The DNP Essential I: *Scientific Underpinnings for Practice* concentrates on the wholeness or health of human beings recognizing that they are in continuous interaction with their environments (American Association of Colleges of Nursing [AACN], 2006). Research ethics within American Indian and Alaskan Native communities require a careful appreciation and respect for the areas of distinction and commonality that characterize appropriate use of scientific methodology within this sociocultural context (Kelley, Dittloff, Belcourt, & Belcourt, 2013). Conducting a descriptive, QI project in an ethical manner within indigenous communities necessitates an active awareness of the extent to which the federal government agencies and affiliated institutions have oppressed, discriminated against, and engaged culturally biased practices with these communities. The impact of these practices extends to the present-day health of indigenous people, who experience health disparities that stem from racism, loss of land, loss of native language, and complex SES factors (Kelley, et al., 2013).

Results

The results from the health care provider and community surveys revealed a contrast between the health care provider's perceptions of barriers to PNC compared to the community. The rank order of perceived barriers held by the 12 health care providers were lack of access to PNC, lack of child care, patient knowledge deficit, patient-provider mistrust, drug use, and teen pregnancy. The rank order of barriers held by the 30 community surveys were lack of access to

PNC, patient-provider mistrust, mental health, lack of childcare, teen pregnancy, illicit drug use, intimate partner violence followed by patient knowledge deficit. There was not a significant change in the number of PNC visits post-intervention.

Process Measures and Outcomes

The goal of this project was to determine if the community education campaign had a positive impact on health care seeking behaviors resulting in an increased number of PNC visits. The community flyer and public service announcements were distributed throughout the community in order to increase awareness of the importance of early and consistent PNC. Comparing pre- and post-intervention scores, there was a decrease in the number of PNC visits. The total number of PNC visits from November 2017 to January, 2018 was 318 compared to 312 PNC visits November 2018 – January, 2019. This represents a net change of -6 and a 1.89 percent decrease in the number of PNC visits. This decrease could be due to several variables such as, decreased trend in PNC visits among those women already seeking early and consistent PNC, decrease in census in Winslow, Arizona.

Unintended Consequences

There were two unintended consequences associated with the community education campaign. During the ride-along trips with the public health nurses, many of the pregnant and post-partum women were not at home. The ride-along trips revealed that several of the women seek services outside of Winslow, Arizona due to the community perception that Winslow has limited preventative services. One young mother stated that she likes to come to Flagstaff, Arizona because “they have nicer facilities compared to Winslow.” The second unintended consequence associated with the community education campaign was an increased interest in the educational modalities among the reservation communities. The public health nurses took the

flyers to the reservation communities and according to the two public health nurses assigned to the reservation communities, there was an increased interest in learning more about the advantages of early and consistent PNC as it relates to *The Navajo Wellness Model*.

Summary

Maternal health is an important predictor of overall current and future population health. Early and consistent PNC is essential in reducing preventable harm to pregnant women and their newborns. This descriptive study has demonstrated promise in improving community health literacy regarding the advantages of early and consistent PNC by implementing an educational campaign aimed at using *The Navajo Wellness Model* focusing the philosophy of Ho'zho'. The information on the flyer promotes harmony, and resiliency through self-respect, self-care, and self-identity and combines these concepts with health promotion tips that are specific to each trimester of pregnancy.

Key Findings and Lessons Learned

Key findings and lessons learned consisted of the importance of the incorporation of cultural beliefs and health literacy when implementing interventions to promote preventative health seek behaviors. Interprofessional collaboration is essential to the success of a quality improvement project. The health promotion and disease prevention team worked with the public health nurses and pharmacists to get the information about the importance of early and consistent PNC to the community. One major lesson learned was the difficulty in explaining the barrier to PNC questionnaire to the community. This took the several meetings with the staff before an understanding was achieved. For example, the Board of Directors, Executive Committee, and members of the medical staff from WIHCC had to provide project approval in order for the project to move forward. There were many conversations with managers from Walmart and

Safeway regarding providing information about the project aims and requesting permission to display the flyers in the pharmacy departments. Lastly, many community ride-along trips with the public health nursing team from WIHCC were conducted in order to track and evaluate the barriers and successes of the intervention.

Strengths

The successful implementation of the project stemmed from the incorporation of the conceptual framework model, *The Navajo Wellness Model*, into the learning modalities. While there was no significant change in the number of PNC visits associated with the community education campaign, there was increased interest in the information from the flyer by the community, health care providers, and the administration from WIHCC. The grant officer from WIHCC expressed a desire of incorporating the findings associated with health literacy to be a part of a grant that will provide preventative services to women living in reservation communities. The community outreach through the education campaign served as a catalyst for the continued empowerment of women in the community regarding health seeking behavior promoting the sustainability of the project.

Interpretation

When interpreting the outcome of this descriptive, QI project, the data collected post-intervention indicated that there is strong evidence to support the need for using health literacy to create education modalities designed to meet the patient where they are in manner that they can understand. After an in-service presentation explaining the aims of the project, there was an improvement in communication and participations from different departments on campus. The education campaign provided a platform for the departments to work together to develop other community outreach projects such as, diabetes Halloween walk, and pediatric immunization

drive with the goal of improving overall health outcomes. The prenatal and maternal-child clinics took ownership of "communicating the vision" by sharing the aims of the project with different departments of the WIHCC campus as well as with the pharmacy team from Walmart. This resulted in the distribution of the educational flyers and in an increased interest in health literacy.

The lead public health nurse communicated with this author bi-weekly to report any changes in the community's perception regarding commencing early and consistent PNC. The public health nurse and their team reported an increase in the number of women that kept their appointments after sharing the flyer with them. The older female members of the families expressed interest in the flyer once they saw that the flyer contained information based on Navajo traditional medicine and *The Navajo Wellness Model*.

Health literacy is recognized as a social determinate of health based on its impact on health outcomes. The link between health inequality and low health literacy is also well established and both are prevalent among the elderly, ethnic minorities, and populations with chronic health conditions (Kilfoyle et al., 2016; Loan et al., 2018). The outcomes of this descriptive, quality improvement project aligns with the findings from literature demonstrating the correlation between health literacy and health outcomes.

The strategic trade-offs and strategic costs associated with the implementation of a community education campaign concentrated on the challenges of the institutionalization of the community outreach programs. How can this project be sustainable or be repeated in a different setting? The three principle challenges were changing community and health care organization traditions, mobilizing a reliable stream of resource teams, and expanding the capacity of WIHCC to be a responsive and reliable partner with the community. Common strategies to address the challenges consisted of obtain strong executive leadership such as, directors of the prenatal and

maternal-child clinics, and the health promotion/disease prevention team members, and integrating community outreach into the education modalities. There is an opportunity for the establishment of a department within WIHCC as a focal point for community outreach.

Limitations

The limitations and barriers associated with data collection included a lack of understanding of how to complete the community surveys, and the limited interval of the eight-week community education campaign. Other limitations were the limited time of the health care providers due to the increased demands of the prenatal and maternal-child clinic, the community and patient perception of seeking early and consistent PNC services, and the project was limited to off reservation communities. The limitations were mitigated by conducting staff training regarding how to complete the survey. The surveys were completed by the patients while waiting for their health care provider contributing to a more efficient use of clinical time. The education modalities incorporating pillars from *The Navajo Wellness Model* served to "plant the seeds" for a larger community outreach project that would include reservation communities where the need is greatest.

The findings from this project will be submitted to the Navajo Human Research Review Board in order to request approval to expand the project to include reservation communities. During the course of implementation of this project, there were conflicting views regarding health seeking behavior among the Board of Directors. Half of the members on the Board of Directors were farmers and part of the Tribal Council. They believed that pregnancy is a normal part of life. They did not understand the correlation between early and consistent PNC and improved maternal-child health outcomes. This barrier was addressed by explaining the

relationship of poor PNC and the increased incidence of pediatric morbidities. After the explanation, there was a better understanding of the importance of early and consistent PNC.

Conclusion

Early and consistent PNC visits are imperative for the health of both the mother and baby to help prevent complications with pregnancy and birth. Native-American women are especially at risk for health disparities for health disparities related to pregnancy and lack of prenatal health care (Hanson, 2012). This quality improvement change can strengthen community awareness of the advantages of early and consistent PNC and increase the number of PNC visits.

Kotter's second stage is to "create the guiding coalition", an organization with the right mix of position, expertise, credibility, and leadership to effectively move needed changes forward. An effective strategy to promote this change is through the implementation of health literacy. Health literacy is fundamental to the success of every patient and health care professional interaction. In order to promote project sustainability, there needs to be increased usage of health communication strategies, health information technology, and measures of patient post-intervention self-management competency to monitor and improve health care quality, population health outcomes, and achieve health equity (Loan et al., 2018).

Generalizability may be achieved through the collaboration with nursing and other health care organizations to integrate nursing models of care for health literacy into Quality and Safety Education for Nurses (QSEN), and other national health care initiatives to improve quality and patient safety (Loan et al., 2018). The DNP prepared nurse can advocate for funding to expand community outreach programs in education (i.e. local community colleges, churches), practice, and in systems of care (Kilfoyle et al., 2016).

The implementation of health literacy to increase community awareness of the benefits of early and consistent is vital to the improvement of fetal and maternal health outcomes among Navajo women living in a rural setting in Northern Arizona. The pairing of key concepts of *The Navajo Wellness Model* with PNC guidelines specific to each trimester of pregnancy can promote resiliency and patient empowerment which could result in an increase in the number of PNC and move closer to the *Healthy People 2020* goal of having 77.9 percent of women receiving early and consistent PNC.

In order to promote the sustainability of the project, the interprofessional collaboration between the health care providers, directors of prenatal care and maternal-child clinics, the members of the health promotion/disease prevention team, and public health nurses continues to grow and remains productive in the community with a goal to reach women in the surrounding communities that are not seeking early and consistent PNC services. A strategic plan is underway to disseminate the key findings from the descriptive, QI project. They are planning on forming a committee that will continue to distribute the flyer to all communities served by WIHCC. The committee plans to meet monthly to evaluate the barriers and successes associated with the community education campaign. The findings have many implications for community outreach to promote patient empowerment through using interventions that focus on health literacy. The findings will be shared with the Executive Committee and Board of Directors in order to gain their approval for the continuation and expansion of the education campaign to reach communities that are on the reservation upon approval of the Navajo Human Research Review Board. The members of the health promotion/disease prevention team have partnered with the Navajo traditional medicine practitioner to conduct PNC classes that educate Navajo

women about traditional practices associated with pregnancy as well as sharing information from the flyer. The classes are being held weekly on Thursday for two hours.

The information from this project has a potential for expanding to other contexts. Upon receiving approval from the Navajo Human Research Review Board, the community education campaign can include Navajo women living in reservation communities that are not able to come to the clinic for PNC services due to the barriers of transportation, costs, and childcare. Understanding how expanding access to PNC influences both maternal and fetal health outcomes and cost is of national relevance as states strive to meet the triple aim of increasing quality and access to PNC, while simultaneously reducing cost (Swartz, Hainmueller, Lawrence & Rodriguez, 2017).

Patient empowerment is essential to the promotion of health seeking behaviors that result in improved maternal and infant health outcomes. Health literacy plays an important role in reproductive knowledge and may impact behaviors and outcomes. Knowledge about contraception, PNC, safe sexual practices, and preventative care is important to keep women healthy and leading productive lives (Kilfoyle et al., 2016). Despite these recommendations, health literacy is not well understood by clinicians, rarely approached as a health care system issue, and is not universally executed across health care domains (Loan et al., 2018). Strategies and initiatives must be implemented to prepare nurses and the community to embrace the importance of health literacy and to use available resources to enhance health literacy skills. The DNP prepared nurse is in a vital position to utilize health literacy best practices to promote high-quality preventative health care unique to the populations they serve. The nurse with a DNP degree can develop, implement and evaluate interventions that can enable all health care

providers to minimize the gap between patient skills and abilities and the demands and complexities of health care systems (Loan et al., 2018).

Practice Implications and Further Study

This QI project can strengthen communication between the patient and health care provider during the first trimester and result in an increased number of PNC visits over the course of the pregnancy. Health care providers can be essential in the promotion of quality early and consistent PNC to Navajo women living in rural Northern Arizona. The application of leadership can promote organizational change that can mitigate the barriers to early and consistent PNC. These target population based interventions can bridge the gap between current practice and best practice recommendations. An effective, sustainable QI change can positively impact evidence-based PNC future guidelines improving maternal and fetal outcomes among this aggregate.

Further study is needed to understand why Native-American, specifically Navajo, women delay entry and do not receive consistent PNC. Future studies are needed to examine the impact of health literacy on preventative health seeking behaviors among this aggregate. More research in the area of group PNC visits may prove to be more effective compared to individual PNC visits and should expand to both peri-urban and rural areas to determine the impact of group PNC visits on diverse populations (Lori, Darkwah, Boyd, Banerjee, & Adanu, 2017).

Suggested next steps are for healthcare providers and community leaders to offer Navajo women a better way to maintain and safeguard their health (Geiermann et al., 2016). There is a need for knowledgeable individuals, such as Navajo traditional medicine practitioners, to serve as a liaison between community members and health care professionals in order to promote

health among groups that have traditionally lacked understanding about the benefits of early and consistent PNC.

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References

Alexy, B., Nichols, B., Heverly, M. A., and Garzon, L. (2012). Prenatal factors and birth outcomes in the public health service: A rural/urban comparison. *Research in Nursing & Health*, 20, 61-70. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/9024478.

Arizona Department of Health Services (2015). Mothers who received early prenatal care state: Arizona. Retrieved from http://www.arizonahealthmatters.org.

American Association of Colleges of Nursing. (2006) *The essentials of doctoral education for advanced nursing practice*. Washington, DC: Author.

Bailey, B. A. (2015). Effectiveness of a pregnancy smoking intervention: The Tennessee intervention for pregnant smokers program. *Health Education & Behavior*, 42(6), 824-831. http://doi:10.1177/1090198115590780

Beeckman, K., Louckx, F., & Puttman, K. (2012). Content and timing of antenatal care predisposing, enabling and pregnancy-related determinants of antenatal care trajectories. *European Journal of Public Health 23*(1), 67-73. doi: 10.1093/eurpub/cks020.

Bloom, T. L., Bullock, L. F., & Parsons, L. (2012). Rural pregnant women's stressors and priorities for stress reduction. *Issues in Mental Health Nursing*, 33(12), 813-819. http://dx.doi.org/10.3109/01612840.2012.712087

Centers for Disease Control and Prevention. (2015). Behavior risk factor surveillance system survey data. Retrieved from http://www.cdc.gov/brfss_faq.htm.

Data USA Report. (2016). *Winslow, Arizona census*. Retrieved from https://datausa.io/profile/geo/winslow-az/.

Geiermann, S. P., Begay, M. G., Robinson, L., & Clough, S. (2016). Health literacy in dentistry and Navajo nation community health representatives. *National Academy of Medicine,* 1-3. doi: 10.31478/201606e.

Guidry, M., Vischi, T., Han, R., & Passons, O. (2001). *Healthy people in healthy communities: a community planning guide using healthy people 2020*. Washington, D.C: U.S. Department of Health and Human Services. The Office of Disease Prevention and Health Promotion.

Hanson, J. D. (2012). Understanding prenatal health care for American Indian women in a northern plains tribe. *Journal of Transcultural Nursing*, 23(1), 29-37.

Harris, J. L., Roussel, L., Dearman, C., and Thomas, P. L. (2016). *Project planning and management: A guide for nurses and interprofessional teams* (2nd ed.). Burlington, MA: Jones & Bartlett Learning.

Heaman, M. I, Sword, W. A., Akhtar, D. N., Bradford, A., Tough, S., Janssen, P. N., …Helewa, M. N. (2014). Quality of prenatal care questionnaire: instrument development and testing. *BioMed Council Pregnancy Childbirth, 3*(14), 188-214. doi: 10.1186/1471-2393-14-188.

Hegarty, K., Brown, S., Gunn, J., Forster, D., Nagle, C., Grant, B., and Lumley, J. (2007). Women's views and outcomes of an educational intervention designed to enhance psychosocial support for women during pregnancy. *Birth*, 34(2), 155-163.

Hornbuckle, L. M., Onukagha, N. A., Bryan, A., Edwards, E.S., Madzima, T., Massey, K., & Robinson, L. E. (2017). Health disparities in women. *Clinical Medicine Insights: Women's Health, 10*(10), 1-4. Retrieved from https://us.sagepub.com/en-us/nam

Jesse, D. E., Gaynes, B. N., Feldhousen, E. B., Newton, E. R., Bunch, S., & Hollon, S. D. (2015). Performance of a culturally tailored cognitive-behavioral intervention integrated

in a public health setting to reduce risk of antepartum depression: A randomized controlled trial. *Journal of Midwifery & Women's Health*, 60(5), 578-592. Retrieved from https://www.sciencedirect.com/journal/journal-of-midwifery-and-womens-health

Kahn-John, M. (2015) Living in health, harmony, and beauty: the Dine' (Navajo) Ho'zho' wellness philosophy. *Global Advances in Health and Medicine, 4*(3), 24-30. doi: 10.7453/gahmj.2015.044

Kelley, A., Dittloff, A., Belcourt, C., and Belcourt, G. (2013). Research ethics and indigenous communities. *American Journal of Public Health, 103*(12), 2146-2152. doi:10.2105/AJPH.2013.301522

Kilfoyle, K. A., Vitko, M., O'Conor, R., and Bailey, S. C. (2016). Health literacy and women's reproductive health: A systematic review. *Journal of Women's Health, 25*(12), 1237-1255. doi: 10.1089/jwh.2016.5810.

Kim, M., & Mallory, C. (2014). *Statistics for evidence-based practice in nursing.* Burlington, MA: Jones & Bartlett Learning.

Kotter, J. P. (2012). *Leading change.* Washington, DC: Library of Congress.

Larsen, A, Exavery, A., Phillips, J. F., Tani, K., & Kante, A. M. (2016). Predictors of health care seeking behavior during pregnancy, delivery, and the postnatal period in rural Tanzania. *Maternal Child Health Journal, 20*(8), 1726-1734 doi.org/10.1007/s10995-016-1976-2.

Loan, L. A., Parnell, T. A., Stichler, J. F., Boyle, D. K., Allen, P., VanFosson, C. A., & Barton, A. J. (2017). Call for action: Nurses must play a critical role to enhance health literacy. *Nursing Outlook, 66*(1), 97-100. doi:https//doi.org/10.1016/j.outlook.2017.11.003.

Lo-Biondo-Wood, G. & Haber, J. (2010). *Nursing research: Methods and critical appraisal for evidenced-based practice* (7th ed.). St. Louis, MO: Elsevier Mosby.

Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017). *Descriptive analysis in education: a guide for researchers.* Washington, DC: U.S Department of Education, Institute of Educational Sciences, National Center for Education Evaluation and Regional Assistance.

Lori, J. R., Darkwah, H. O., Boyd, C. J., Banerjee, and Adanu, R. M. (2017). Improving health literacy through group antenatal care: A prospective cohort study. *BioMed Central Pregnancy Childbirth, 17*(228), 1-9. doi 10.1186/s12884-017-1414-5.

Mekonnen, N., Berheto, T. M., Ololo, S., Tafese, F. (2017). Quality of antenatal care services in Demba Gofa Woreda, Gamo Gofa zone, rural Ethiopia. *Health Science Journal,* 11(3), 1-17. Retrieved from http://www.pradec.info/.

Melnyk, B. M., & Fineout-Overholt. (2015). *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.). Philadelphia, PA: Wolters Kluwer

Moser, A., & Korstejens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection, and analysis. *European Journal of General Practice*, *24*(1), 9-18. doi: 10.1080/13814788.2017.1375091.

Munro, M. L., Dahlem, C. Y., Lori, J. R., and Martyn, K. K. (2012). Prenatal psychosocial risk assessment using event history calendars with black women. *The Association of Women's Health, Obstetric and Neonatal Nurses, 41*(4), 483-493. doi: 10.1111/j.1552-6909.2012.01382.x.

National Institute of Allergy and Infectious Diseases. (2017). *Understanding indirect costs.* Retrieved from https:www.niaid.nih.gov/grants-contracts/understanding-indirect-costs.

Paradis, E., O'Brien, B., Nimmon, L., Banderia, G., & Martimianakis, M. A. (2016). Design: Selection of data collection methods. *Journal of Graduate Medical Education,* 263-264. doi:http://dx.doi.org/10.4300/JGME-D-16-00098.1

Pi, I. H., Mori, E. S., Darney, B. G., Morales, H. R., & Lozano, R. (2016). Measuring the adequacy of antenatal health care: A national cross-sectional study in Mexico. *Bulletin World Health Organization*, 94, 452-461. Retrieved from https://www.who.int/bulletin/en.

Ponto, J. (2015). Understanding and evaluating survey research. *Journal of Advanced Practice Oncology, 6*(2), 168-171. Retrieved from ascopubs.org/toc/jop/6/2

Reeve, C., Banfield, S., Thomas, A, Reeve., D., & Davis, S. (2016). Community outreach midwifery-led model improves antenatal access in a disadvantaged population. *The Australian Journal of Rural Health*, 24, 200-206. Retrieved from hhtp://www.wiley.com.liproxy.nau.edu/wileyCDA/

Singleton, K., & Krause, E.M. (2009). Understanding culture and linguistic barriers to health literacy. *The Online Journal of Issues in Nursing, 14*(3), 1-12. Retrieved from http://www.nursingworld.org/ojin/.

Swartz, J. J., Hainmueller, , J., Lawrence, D., & Rodriguez, M. I. (2017). Expanding prenatal care to unauthorized immigrant women and effects on infant health. *Obstetrics & Gynecology, 130(*5), 938-945. doi:10.1097/AOG.0000000000002275.

The American College of Obstetrics and Gynecologists. (2014). Committee opinion. *Health disparities in rural women.* Washington, DC: Author

Torres, M. E., Smithwick, J., Luchok, K. J., and Rice, G. R. (2012). Reducing maternal and child health disparities among Latino immigrants in South Carolina through a tailored,

culturally appropriate and participant-driven initiative. *California Journal of Health Promotion, 10*(2), 1-14. Retrieved from http://www.cjhp.org.

Wingate, M.S., Barfield, W. D., Smith, R. A., & Petrini, J. (2015). Prenatal disparities between American Indians and Alaska natives and other US populations: comparative changes in fetal and first day mortality, 1995-1998. *Maternal Child Health Journal, 19*(1), 1802-1812. Retrieved from jhttp%3A%2F%2Fwww.springer.com%2Fus%2F||type

Winslow Indian Health Care Center (2014). Mission statement: Accessibility, quality, and cost effective health care. Retrieved from http://www.wihcc.com/vision-and-mission.html.

World Health Organization (2010). *Framework for action on interprofessional education & collaborative practice.* Washington, DC: Author.

Zaccaginini, M. E., & White, K. W. (2017). *The doctor of nursing practice essentials: a new model for advanced practice nursing,* (3rd ed.). Burlington, MA: Jones & Bartlett Learning.

Appendix A

Table 1 *Evaluation Table of Retained Studies: Interventions to Address Barriers to Prenatal Care*

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
Bloom, T., Glass, N., Curry, M. A., Hernandez, R., & Houck, G. (2012). Maternal stress exposures, reactions and priorities for stress reduction among low-income, urban women.	Not Stated	Mixed methods approach; qualitative and quantitative methods. Qualitative description approach (e.g. open-ended interview guide with qualitative questions. Quantitative measures: Perceived Stress Scale, Violence Instrument Scale.	24 low-income women Setting: Outpatient: Urban health/social service (i.e. Healthy Start and Women, Infants, and Children programs)	Financial stress (i.e. not having enough food, affording housing). Violence exposure, Access to PNC. Depression. Provider mistrust.	1.) Reinforced the need for the provision of psychosocial risk screening by providers. 2.) Increased focus on how providers perform the screening and intended/unintended messages given to the vulnerable women. 3.) Providers need to provide an appropriate assessment and follow up during PNC visits.	Healthcare providers can play a key role in reducing maternal stress by: a. Encouraging patient discussion of stressors. b. Providing appropriate assessment and follow up during PNC visit c. Strengthening patient-provider relationships (i.e. patient-centered care)
Reeve, C., Banfield, S., Thomas, A.,	Not Stated	A retrospective 2-year evaluation of PNC by implementing a new model of PNC/outreach care for	213 pregnant women in Aboriginal	1.) Access to PNC.	Main outcome measures were the number of PNC visits, their location, and the quality care indicators (i.e. presentation during	Healthcare providers to provide quality, early and consistent PNC to women living in rural settings using a new

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
Reeve, D., Davis, S. (2016). Community outreach midwifery-led model improves antenatal access in a disadvantaged population.		women living in a rural area (e.g. Healthy for Life program).	communities in Australia. Setting: outpatient.	2.) Late presentation to PNC. 3.) Maternal malnutrition. 4.) High rates of alcohol and tobacco use during pregnancy	first trimester, alcohol and smoking, birth weight) Findings included an increase in access to PNC from 10% to 24%, There was an increase in women presenting during the first trimester (40% to 58%) Provider screening for tobacco and alcohol use increased from 48% to 93%	outreach model highlighting the importance of embedding research and continuous QI into routine PNC
Munro, M. L., Dahlem, C. Y., Lori, J. R., & Martyn, K. K. (2012) Prenatal psychosocial risk assessment using event history	The Interaction Model of Client Health Behavior by Cox (1982)	A descriptive qualitative design was used to explore the clinical acceptability of using the event history calendar (EHC) in routine PNC visits among African-American women living in an inner city setting	A convenience sample of 30 African-American pregnant women recruited from an inner-city prenatal clinic over a 6 week time period. Inclusion criteria: African-American	Provider mistrust	Three main themes emerged related to how the EHC enhanced patient communication: 1. Providing **"an opening for patient disclosure**." 2. Increasing the provider's awareness of patient's unique background situation, **"an**	Support the use EHC tool by providers to initially engage the pregnant patient, and record data on a trimester basis as recommended by ACOG (2006), and facilitate patient-provider interactions.

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
calendars with black women			women, 18-35 years of age, at least 2 PNC visits at inner-city clinic, and ability to read/write English		**understanding with you."** 3. A way for providers to "**know you, your life, and future plans**." Conclusion: Prenatal EHC facilitated patient-provider communication during the PNC visit by allowing the healthcare provider and patient to "start on the same page."	
Torres, M. E., Smithwick, J., Luchok, K. J., Rice, G. R. (2012). Reducing maternal and child health disparities among Latino immigrants in South Carolina through a tailored, culturally	Not stated but interventions are based on medical and public health models.	Pretest and Posttest methods to determine the impact of the 14 hour PNC education course on Latino immigrants living in rural South Carolina. Pre-test and post-test were collected using open-ended questions in Spanish that were coded individually and then coded by researchers.	523 Hispanic women from 13 countries attending the PNC education courses between 2007-2010.	1. Patient knowledge. 2. Access to PNC. 3. Continuation of breastfeeding. 4. Increased incidence of neural tube defects due to folic acid deficiency.	Participants in the 14 hour PNC education program improved their knowledge regarding having a healthy pregnancy, and decreasing high risk behaviors. Learned importance of taking folic acid (54% pretest to 91% posttest), at the most adequate time to protect against neural tube defects (50% at pretest to 87% post-test), and understanding of normal	Encouraging health education programs to modify their teaching approach/train instructors in order to reach their target population. The 14 hour education course was taught in Spanish incorporating diverse perspectives (specificity of intervention).

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
appropriate and participant-driven initiative				5. Decreased understanding of mood changes during pregnancy and postpartum.	mood changes (56% pretest to 89% posttest).	
Hegarty, K., Brown, S., Gunn, J., Forster, D., Nagle, C., Grant, B, and Lumley, J. (2007). Women's views and outcomes of an educational intervention designed to enhance psychosocial support for women during pregnancy.	Not stated but interventions are based on medical and public health models.	Before and after design to evaluate the effectiveness of a new (ANEW) approach, improves pregnant women's rating of care, and practitioner's listening skills and comfort to disclose psychosocial issues	1. 21 midwives and 5 doctors were trained over 4 months to implement the survey 2. 584 women out of 747 participated in a pre-ANEW survey and 481 out of 657 participated in a post-ANEW survey Setting: outpatient PNC clinic at Mercy Hospital for Women, Melbourne, Australia	Open communication between patient and provider regarding: patient intimate partner violence, substance misuse, intellectual disability lack of social and interpersonal support	1.The ANEW program demonstrated a slight improvement of knowledge , confidence, and ability of health care practitioners to talk about and help women deal with issues that arise during pregnancy. 2. 1in 4 women stated that midwives asked questions that helped them to discuss emotional issues during their PNC visits compared to 1 in 10 women that stated that hospital doctors did so.	Suggest trends for better communication by health care providers for pregnant women. ANEW should be implemented and evaluated in other settings, using rigorous methods. Limitations: include the conduct of the study in a single hospital, use of the before and after design, and the limited reach of the education program

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
Bailey, B. A. (2015). Effectiveness of a pregnancy smoking intervention: The Tennessee intervention for pregnant smokers program.	Not stated but interventions are based on medical and public health models.	Systematic review: RCTs enrolling pregnant women who were current cigarette smokers from five prenatal practices in rural South-Central Appalachia over a 4 year period. All patients accepted Medicaid with no quota limits resulting in a low average socioeconomic status (SES) in each practice's population of patients Setting; Outpatient	1595 of 1,685 eligible women RCTs compared the intervention group (pregnant smoker entering PNC Jan 2008-Dec 2011, N=1685) to the historical control group (pregnant smoker entering PNC Jan 2006-Dec 2006). Primary variable: group membership with participants classified in the intervention group or historical control group Exclusion criteria: women whose pregnancy ended prior to 20 weeks or who delivered	1. Tobacco use during pregnancy. 2. Low SES 3. Patient education regarding the maternal/fetal effects of smoking	418 women enrolled in the intervention group quit smoking by the end of the second trimester and remained smoke free to delivery compared to 45 women enrolled in the historical control group. Compared to the intervention participants who did not quit smoking, those who quit smoking and were smoke free at delivery had larger babies, with significantly heavier birth weights (>200g), longer lengths and greater head circumferences. In addition, those who quit smoking had shorter hospital stays and were 80% less likely to experience a fetal/neonatal death.	The result of the current study demonstrates the effectiveness of a pregnancy smoking intervention implemented as part of PNC in a rural Southern population. Encourages health care providers to assess environmental, social, and motivational factors and then tailor the intervention for each participant.

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
			less than 4 weeks after entering PNC			
Pi, I. H., Mori, E. S., Darney, B.G., Morales, H. R., and Lozano, R. (2016). Measuring the adequacy of antenatal health care: A national cross-sectional study in Mexico.	Not stated but interventions are based on medical and public health models.	A cross-sectional retrospective study that conducted an analysis of data from the Mexican National Health and Nutrition Survey in order to propose PNC for measuring the continuum of health care. Survey data were collected in a single interview. Dependent variables: continuity and adequacy of PNC, timely PNC during the first trimester, sufficient PNC, and appropriate in content	National population of 115,170,278 with a sampling representative at the state level (Mexico has 32 states) and by rural/urban stratum.	1. Access to PNC. 2. Early and continuous PNC. 3. Patient education and health insurance. 4. Low SES.	98.4% of women received PNC but only 71.5% received PNC that was classified as adequate. The covariates most highly correlated with the receipt of adequate PNC were the mother's education, health insurance, indigenous status, and household wealth.	Efforts by heath systems, governments, and researchers to measure and improve PNC by adopting and implementing interventions with a more rigorous definition of care to include continuity and process of care.

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
Alexy, B., Nichols, B., Heverly, M. A., and Garzon, L. (2012). Prenatal factors and birth outcomes in the public health service: A rural/urban comparison	Not Stated, but interventions are based on medical and public health models.	A comparative study to determine the effectiveness of the Maternity Risk Screen developed by the State Department of Health to capture high risk pregnant women living in rural and urban settings as identified by the Baby Care Program	Ages of the sample ranged from 13 to 44, with a mean age of 23.6 for the urban group and 22.0 for the rural. 415 files/records from the urban center and 364 from the rural center. The sample represents 64% of the total deliveries in the rural health district compared to the 10% of all deliveries in the urban health district. Setting: Outpatient Public Health Department Prenatal Clinics. Exclusion Criteria: women with multiple births, uncontrolled	1. Access to PNC 2. Low SES 3. Patient education regarding nutrition	The rural group was more likely to be single, African-American, less educated, and have a lower income compared to the urban group. The rural group was more likely to have a higher incidence of low birth weight infants. Limitation: to increase the generalizability of this study, a larger sample size from multiple sites must be obtained	The results suggest that implementation of statewide or nationwide programs must individualize care based on community assessments. The study supports the notion that there is a need for health care providers to develop differential models of care which will result in improved health for mothers and infants.

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
			diabetes, or hypertension			
Jesse, D. E, Gaynes, B. N., Feldhousen, E. B., Newton, E. R., Bunch, S., and Hollon, S. D. (2015). Performance of a culturally tailored cognitive-behavioral intervention integrated in a public health setting to reduce risk of antepartum depression: A randomized controlled trial.	The intervention tool, Insight-Plus, was adapted from Insight, a manualized program for non-pregnant women reading at a college level which is based on Beck's cognitive-behavioral model and Jesse's bio-psychosocial spiritual theory. The aims of the study met recent recommendati	This study used a RCT, a two-group pretest/posttest control group design, over a 6 week period to evaluate the feasibility and efficacy of Insight-Plus, a manualized culturally tailored and technology-enhanced cognitive-behavioral intervention for African-American, Caucasian, and Hispanic, rural low income women at risk for antepartum depression.	146 African-American, Caucasian, or Hispanic, rural, low-income pregnant women who scored a 4 or higher on the Edinburgh Postnatal Depression Scale (EPDS) were stratified as high risk for antepartum depression (EPDS 10 or higher) or low-moderate risk (EPDS 4-9), and randomly assigned to the cognitive-behavioral intervention or treatment as usual groups.	1. Provider mistrust. 2. Depression. 3. Patient education regarding symptoms of depression. 4. Access to PNC. 5. Child care during PNC visit. 6. Low SES.	Both the cognitive-behavioral intervention and the treatment as usual groups had significant reduction in the EPDS scores from T1 (baseline) to T2 (post-intervention) and T1 to T3 (follow up). In women with risk for depression (n=62), there was no significant treatment effect from T1 to T3 for the EPDS. The cognitive-behavioral intervention significantly reduced EPDS scores for African-American women at risk (n=43) from T1 to T2 (5.59 vs 2.18, *P*=.02) and from T1 to T3 (6.32 vs 3.14 *P*= .04).	Findings highlight the importance of integrating a cognitive-behavioral intervention, Insight-Plus, tailored to the individual's needs and to be delivered in rural prenatal clinics, may help reduce the significant burden of antepartum depressive symptoms, sequelae, consequences and complications. These promising findings need to be replicated in a larger controlled clinical trial that incorporates methods to maintain greater participant engagement.

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
	ons of the ACNM position statement on Depression in Women, the APA, and ACOG collaborative report for the management of depression during pregnancy.		Inclusion criteria: 18 years of age or older, between 6-30 weeks gestation, enrolled at the local health department, and Medicaid, Women, Infant and Children Program. Exclusion criteria: spontaneous abortion before 20 weeks, fetal demise, diagnosed with hypothyroid, schizophrenia, bipolar disease, or receiving treatment for depression. Setting: Outpatient rural prenatal clinic			
Mekonnen, N., Berheto, T. M.,	Modified conceptual framework:	A facility based cross sectional study design (random sampling	418 of 423 sample size of pregnant women receiving	1. Patient satisfaction	The overall proportion of mothers who were satisfied with PNC in this	The weak relationship between PNC utilization and maternal/newborn

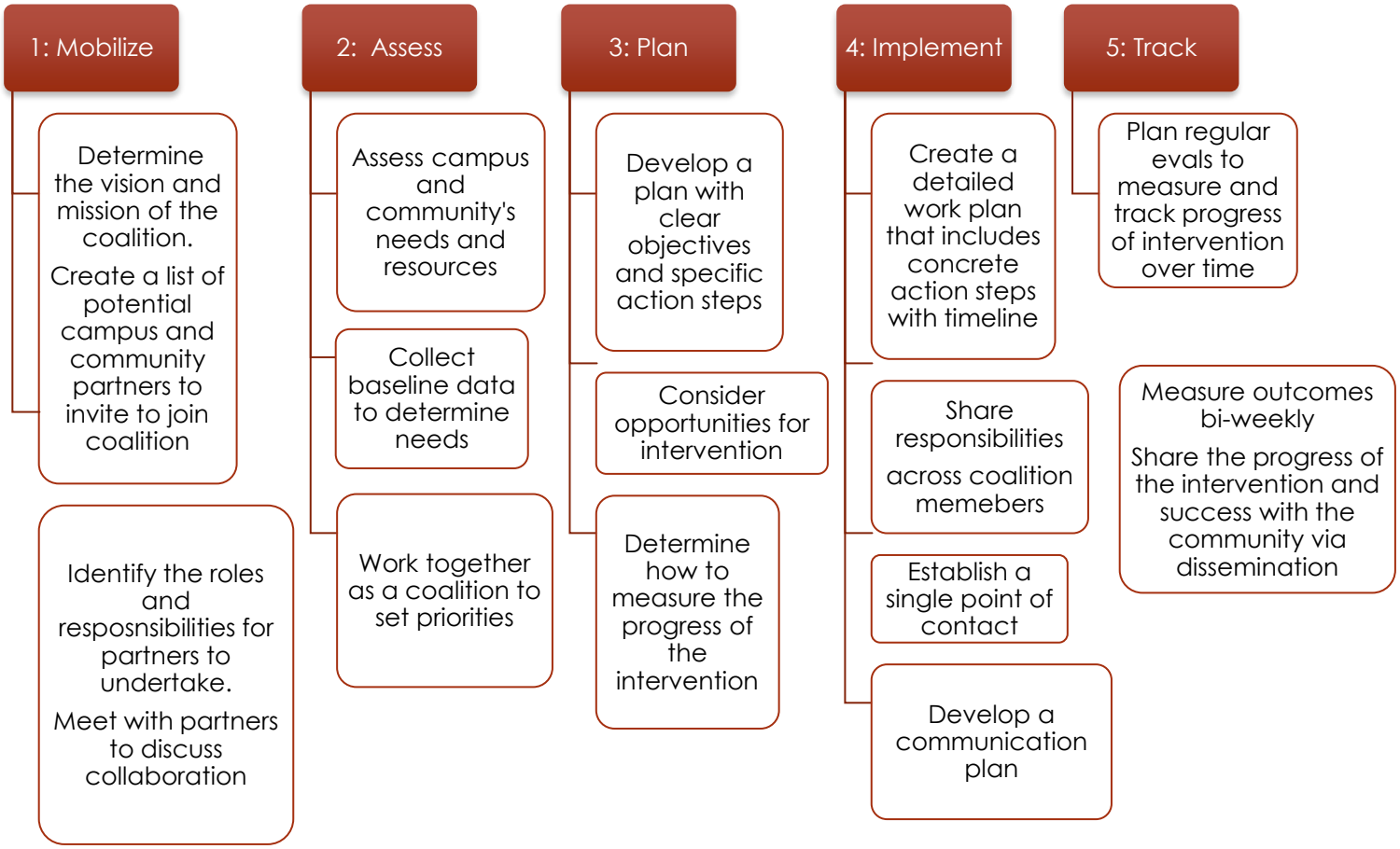
Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
Ololo, S., and Tafese, F. (2017). Quality of antenatal care services in Demba Gofa Woreda, Gamo Gofa zone, rural Ethiopia.	Quality of Prenatal Care focusing on structure, process, and outcome of the delivery methods of PNC. Interventions are adapted from the Donabedian Health Care Quality Model	method) using quantitative and qualitative data from March 25-April 16, 2014. PNC is one of the evidenced-based interventions to decrease maternal/fetal outcomes. The aim of this study is to assess the quality of PNC services in rural public health centers of Demba Gofa Woreda. Quantitative data was exported to SPSS for analysis. Bivariate and multiple variables analysis were carried out to identify client satisfaction of PNC services. Qualitative data was manually analyzed thematically . The	PNC at one of four rural public health care settings. Inclusion criteria: All pregnant women who reside in the study area and attend PNC within the data collection period. Dependent variable: client satisfaction Independent variables: socio-demographic variables (i.e. age, educational status, religion, and monthly income), time of initiation of PNC visits, wait time during PNC visit, access to PNC, advice on nutrition, birth	with quality of PNC. 2. Early and consistent PNC visits. 3. Patient education regarding nutrition, and birth preparedness. 4. Access to PNC. 5. Low SES. 6. Health care provider training, resources, and availability.	study was 21.5% with (95% CI: 17.9%-25.6%). This percentage is very low compared to other studies in developing countries which were 81.4%. Mothers who had their first PNC visit were almost two times more likely to be unsatisfied compared to mothers who had follow up visits. The study also demonstrated that mothers who did not receive advice re: nutrition, and birth preparedness were three times more likely to be unsatisfied than mothers who were advised. Lastly, the study revealed that the health centers had inadequate number of skilled personnel to attend pregnant women during PNC visit Strengths of the study: Utilization of different methods of data collection	survival has motivated a call to health care providers to focus on interventions that will address the quality of PNC rather than mere PNC attendance

Author & Title	Conceptual Framework	Design/Method	Sample/Setting	Barrier(s) Addressed	Study Findings	Study Suggestions
		results were triangulated with quantitative data.	preparedness, and client-provider interaction.	7. Provider mistrust.	and the triangulation of quantitative findings with qualitative findings which could increase the validity of the study results. Limitations of the study: 1. Hawthorne effect: presence of an observer during client-provider interaction may have improved the provider's performance and reduced the client's openness during PNC visit. 2. Social desirability bias: study tried to minimize by interviewing mothers in a separate place by trained nurses that were not affiliated with the facilities studied.	

Key: PNC= prenatal care; **MMA**= mixed method approach, **NS**= not stated, **OP**= outpatient, **PM**=provider mistrust, **APC**= access to prenatal care, **FS**=financial stress, **D**= depression, **FS**= financial stress, **IPV**= intimate partner violence, **FU**=follow up, , **HCP**= health care provider, **QDD**= qualitative descriptive design, **AA**=African-American, **EHC**= event history calendar, ↑=improve, **PE**= patient education, **SES**=social economic status, **SR**=systematic review, **RCT**= randomized controlled trial, **CS**= comparative study, **r**=rural, **u**=urban, **18+**= 18 and over, **EPDS**=Edinburgh Postnatal Depression Scale.

Appendix B

Table 2. *MAPIT Framework (Guidry et al., 2001)*



MAP-IT: mobilize, assess, plan, implement, and track

Appendix C

WIHCC Approval Letters

WIHCC | WINSLOW INDIAN HEALTH CARE CENTER

REQUEST TO INTRODUCE BUSINESS

REQUESTOR: Adrien Gupton

DATE: July 5, 2018

☒ Executive Committee ☐ Board of Directors

ISSUE: Presentation of Doctorate of Nursing Project Proposal

☐ Information Report Only ☒ Decision Requested

☐ Other Action Request:

BACKGROUND:

I am a Certified Nurse-Midwife and Family Nurse Practitioner. I teach nursing at Northern Arizona University. I am also a Doctorate of Nursing Practice (DNP) student and I would like permission to conduct my project at Winslow Indian Health Care Center.

DISCUSSION/HIGHLIGHTS:

- Promotion of early and consistent Prenatal Care among Native-American women living in a rural Northern Arizona setting.
- Promote patient empowerment through cultural specific/sensitive education campaign in the community.
- Result: an increase in the number of prenatal care visits

PROPOSED ACTIONS/SOLUTIONS/DECISION:

- To gain approval from the Executive Committee after my presentation
- To be able to present my DNP project proposal to the Board of Directors at their meeting

DECISION ☒ Approved/Accepted as Presented Date: 7/5/18

☐ Approved/Accepted as Amended

☐ Other

Motion by: Signature Redacted Seconded by: Signature Redacted

By a vote of 8 in favor, 1 opposed, and 0 abstained.

Comments:

WIHCC | **WINSLOW INDIAN HEALTH CARE CENTER**

REQUEST TO INTRODUCE BUSINESS

REQUESTOR: Adrien Gupton

DATE: July 6, 2018

☐ Executive Committee ☒ Board of Directors

ISSUE: Presentation of Doctorate of Nursing Project Proposal

☐ Information Report Only ☒ Decision Requested

☐ Other Action Request:

BACKGROUND:

I am a Certified Nurse-Midwife and Family Nurse Practitioner. I teach nursing at Northern Arizona University. I am also a Doctorate of Nursing Practice (DNP) student and I would like permission to conduct my project at Winslow Indian Health Care Center.

DISCUSSION/HIGHLIGHTS:

- Promotion of early and consistent Prenatal Care among Native-American women living in a rural Northern Arizona setting.
- Promote patient empowerment through cultural specific/sensitive education campaign in the community.
- Result: an increase in the number of prenatal care visits

PROPOSED ACTIONS/SOLUTIONS/DECISION:

- To gain approval from the Executive Committee after my presentation
- To be able to present my DNP project proposal to the Board of Directors at their meeting

DECISION ☒ Approved/Accepted as Presented ☐ Approved/Accepted as Amended ☐ Date 7/6/18

Motion by: Signature Redacted Seconded by: Signature Redacted

By a vote of 7 in favor, 0 opposed, and 1 abstained.

Comments:

Appendix D

Northern Arizona University IRB Approval Letter

NORTHERN ARIZONA UNIVERSITY Office of Regulatory Compliance

Institutional Review Board
Human Research Protection Program

805 S Beaver St
Building 22, Room 215
PO Box: 4062
Flagstaff AZ 86011
928-523-9551
http://nau.edu/Research/Compliance/Human-Subjects/Welcome

To:	Adrien Gupton, MSN
From:	NAU IRB
Date:	September 4, 2018
Project:	Promoting Early and Consistent Prenatal Care to Native-American Women Living in Rural Northern Arizona
Project Number:	1295807-1
Submission:	New Project
Review Level:	Expedited Review
Action:	APPROVED
Project Status:	Active - Open to Enrollment
New Approval Expiration Date:	September 3, 2019
Review Category/ies:	**Expedite Approval (45 CFR 46.110 Category 5)**: Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis). **Expedite Approval (45 CFR 46.110 Category 7)**: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. **Vulnerable Population - Pregnant Women (45 CFR 46.204): As documented in the file,** research that where scientifically appropriate, preclinical studies, including studies on pregnant animals, and clinical studies, including studies on nonpregnant women, have been conducted and provide data for assessing potential risks to pregnant women and fetuses; the risk to the fetus is caused solely by interventions or procedures that hold out the prospect of direct benefit for the woman or the fetus; or, if there is no such prospect of benefit, the risk to the fetus is not greater than minimal and the purpose of the research is the development of important biomedical knowledge which cannot be obtained by any other means; any risk is the least possible for achieving the objectives of the research; if the research holds out the prospect of direct benefit to the pregnant woman, the prospect of a direct benefit both to the pregnant woman and the fetus, or no prospect of benefit for the woman nor the fetus when risk to the fetus is not greater than minimal and the purpose of the research is the development of important biomedical knowledge that cannot be obtained by any other means, her consent is obtained in accord with the informed consent provisions of subpart A of this part; if the research holds out the prospect of direct benefit solely to the fetus then the consent of the pregnant woman and the father is

Appendix E

Community/Patient Survey adapted from the QPCQ Tool

Please choose barriers to prenatal care on a scale of 1-8 in order of what is the most important reason that would stop you from keeping regular prenatal care appointments with your doctor or nurse-midwife. There is a space at the bottom of the page marked "other" if you have another reason that is not listed.

Barriers to Prenatal Care	**Ranking**
Lack of transportation	
Lack of child care	
Patient knowledge deficit (you do not understand the information that the doctor, midwife tells you)	
Patient-provider mistrust (you do not feel comfortable with the doctor/midwife)	
Teen pregnancy	
Tobacco, alcohol, illicit drug use	
Intimate partner violence (you do not feel safe at home)	
Mental health	

Provider Survey is adapted from QPCQ tool with permission from Heaman et al. (2014)

Other:

Appendix F

Health Care Provider Survey adapted from the QPCQ Tool

Provider Demographics

1. Gender_____
2. Years of Practice_____

Please rank barriers to prenatal care on a scale of 1-8 in order of how common/important they are perceived to be as barriers. There will be a place marked "other" at the bottom of the page to allow providers to write in and rank barriers in order that were not included on the survey.

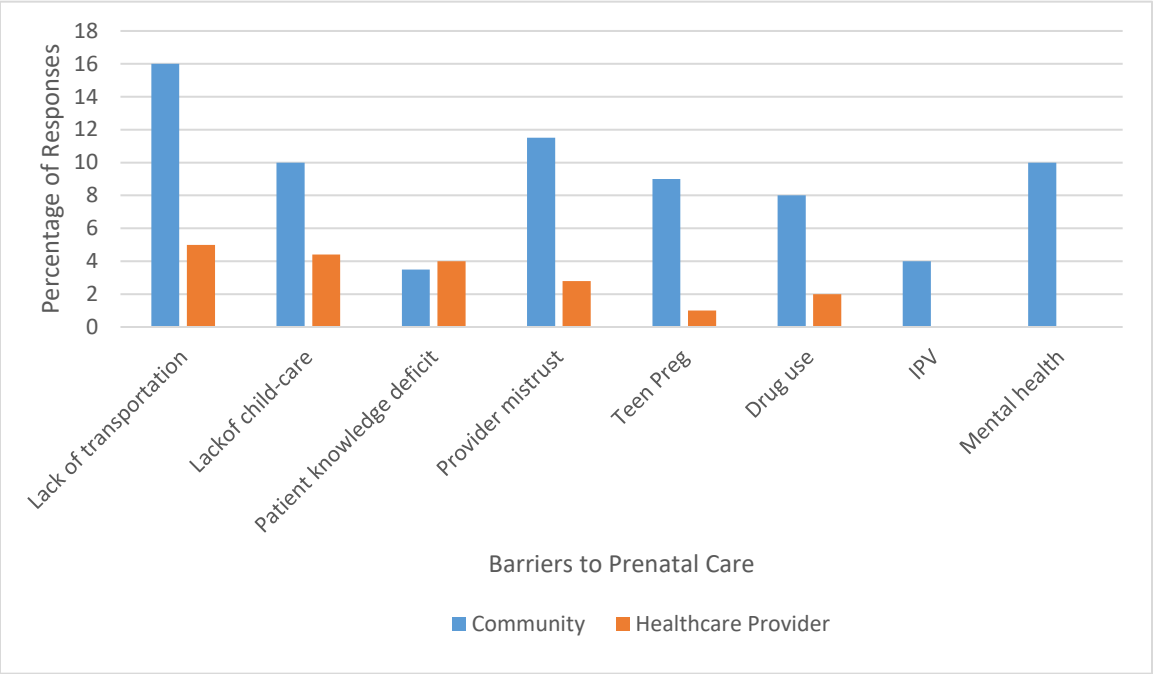
Barriers to Prenatal Care	**Ranking**
Lack of access to care (transportation)	
Lack of child care	
Patient knowledge deficit	
Patient-provider mistrust	
Teen Pregnancy	
Tobacco, alcohol, illicit drug use	
Intimate partner violence	
Mental health	

Provider Survey is adapted from QPCQ tool with permission from Heaman et al. (2014)

Other:

Appendix G

Table 3: *Perceptions of Community v. Health Care Provider Barriers*



IPV: Intimate Partner Violence

Appendix H

Table 4: *Limited Data Set from Chart Review*

Patient	Age	PNC visits	zip code	med history	social history	education level	
1							
2							
3							
4							
5							
6							

Appendix I

Project Intervention: *Community Flyer for Education Campaign*