

NURSE HOME VISITING PROGRAM AND POSTPARTUM CARE

by

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Abstract

Community Medicaid/self-pay obstetric clinics report that only 52% of their patients return for their 6-week postpartum visit. This process improvement project evaluated the improvement strategies of providing patient education, ensuring transportation, and providing an appointment reminder by a postnatal nurse home visiting program on return rates for the 6-week postpartum visit. After creation of an evidence-based educational pamphlet, the postnatal home visiting nurses and schedulers were educated on providing the educational pamphlet, setting up transportation if needed, and calling patients two days before their 6-week visit. First quarter 2017 pre-implementation data and first quarter 2018 post-implementation data about demographics and return rates were collected and outcomes compared. The population demographics of age, race, ethnicity, marital status, parity, payor group, and OB provider group for mothers visited were similar in both groups. In the pre-implementation group (n=172), 91 (52.9%) mothers returned for their 6-week postpartum visit. In the post-implementation group (n=131), 98 (74.8%) mothers returned for their 6-week postpartum visit, an increase of 21.9% ($p < .001$). Simple strategies such as providing education about the importance of the 6-week postpartum visit, ensuring transportation, and providing reminder phone calls by a nurse home visiting program increased adherence to the 6-week postpartum visit. Improving 6-week postpartum return rates can positively impact health prevention, wellness, and contraception use for the postpartum woman, potentially leading to prevention of unintended pregnancies.

Keywords: postpartum care; 6-week postpartum visit; home visiting; nurse home visiting programs; patient education; health belief model; process improvement

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Chapter One: Introduction

The American College of Obstetrics and Gynecology (ACOG) (2016) recommends that all women undergo a comprehensive postpartum visit within the first 6 weeks after childbirth or sooner for high-risk women who experience complications. The purpose of the 6-week visit is for preventative care and ensuring a smooth transition to well woman care. The visit should include a full assessment of physical, social, and psychological well-being, as well as each woman can receive her desired form of contraception during the visit. Establishing women's reproductive goals and assisting them in choosing a contraceptive method is aimed at increasing birth spacing and preventing unintended pregnancies (Henderson et al., 2016). Recent estimates in the United States showed that 38% of pregnancies have short interpregnancy intervals (USDHHS, 2014). Unintended pregnancy rates also remain high even though rates did decline to 45% in 2011 as compared to 51% in 2008, with racial and ethnic minority women experiencing higher rates as compared to whites (Finer & Zolna, 2016; Jackson, Wang, Morse, 2017). Recently, between 40 and 55 percent of women do not attend a postpartum visit (ACOG, 2016; Levine, Nkonde-Price, Limaye, & Srinivas, 2016).

Variables associated poor return rates for the 6-week postpartum visit include having Medicaid or no insurance, being less than 20 years old, being unmarried, being Hispanic or Latina, being African American, having less than a high school education, having a vaginal delivery, having less than five prenatal visits or no prenatal care, having no postpartum complications, experiencing infant loss, not receiving dental care, and having no counseling to attend the visit (Lu & Prentice, 2002; Morgan, Hughes, Belcher, & Holmes, 2018; Nkwabong, Ilue, & Bisong, 2015; Wilcox, Levi, & Garrett, 2016). In a recent review of evidence evaluating interventions in the antenatal and postnatal periods to increase utilization of the 6-week

postpartum visit, 19 intervention studies focused on increasing use of the postpartum visit and 12 were found to be statistically significant (Stumbras, Rankin, Caskey, & Haider, 2016). Potential positive interventions in the postpartum period include offering incentives, patient education, appointment scheduling strategies, and changing timing of visits. Implementing other specific interventions including postpartum hospital and home visits, telephone follow up, mail reminders, extended comprehensive education and resource availability, child care provision, financial assistance, and transportation assistance all increased return rates for postpartum visits (Bryant, Haas, McElrath, & McCormick, 2006; Buckley, 1990; Ghilarducci & McCool, 1993; IHPI, 2003; Kabakian-Kasholian & Campbell, 2007; Stumbras et al, 2016).

Nurse postpartum home visiting programs are increasing across the United States with the allocation of 1.5 billion dollars in federal funding provided as part of the 2010 health care legislation (Alonso-Marsden et al., 2013). Studies have suggested that postnatal nurse home visiting programs provide emotional and educational support for parents after birth, improve parenting skills and behaviors, and connect families with their providers as well as community resources, resulting in more preventative care and reduced emergency medical care (Dodge, Goodman, Murphy, O'Donnell, & Sato, 2013; Kendrick et al., 2000; Kronberg, Vaeth, & Kristensen, 2012; Yonemoto, Dowswell, Nagai, & Mori, 2015). Only a few studies have investigated the impact of home visiting programs on return rates for the 6-week postpartum visit. Ghilarducci and McCool (1993) suggested that a single postpartum home visit by a nurse midwife among low-income families at an urban community health clinic increased the return rate for the postpartum visit for the intervention group as compared to the control group. Even though these results were promising, no significance was found, so more research is needed to determine effectiveness of this intervention.

Problem Statement

According to claims data and medical record reviews, the National Committee for Quality Assurance (2015) reported that only 61.8% of Medicaid recipients had a postpartum visit between 21 and 56 days after delivery as compared to 76.9% of mothers with commercial insurance. In two Medicaid/self-pay community Obstetric clinics in the Piedmont region of North Carolina, the clinics reported that only 52% of their patients return for their 6-week postpartum visit. At a large birthing facility in the same community, a grant funded, universal, postpartum, short-term nurse home visiting program was developed for all families who delivered at the facility and who reside in the local county. The home visiting nurse provides a comprehensive, integrated home visit at 3-4 weeks postpartum for those families who agree to participate in the program. This quality improvement project evaluated the improvement strategies of providing patient education, assuring transportation, and providing an appointment reminder by a postnatal nurse home visiting program on return rates for the 6-week postpartum visit.

Justification of Project

Healthy People 2020 includes as one of their objectives to increase the proportion of women who attend a postpartum care visit as well as prevent unintended pregnancies since nearly half of all pregnancies are unintended with associated risks of low birth weight, postpartum depression, delays in receiving prenatal care, and family stress (USDHHS, 2014). Further, the Center for Medicaid and CHIP Services (CMCS) created national maternal and infant health goals through the Maternal and Infant Health initiative to promote healthier outcomes for Medicaid and CHIP enrollees, including to increase the rate of postpartum visits by 10% in at least 20 states over a three-year period (CMS, 2017).

Postpartum care after birth, though, is often fragmented among maternal health care providers, and communication between inpatient and outpatient settings is inconsistent (ACOG, 2016). Traditional care suggests that an end to pregnancy-related care is the obstetrical postpartum visit, but this visit is underutilized, preventing a positive transition to well-woman and interconception care as well as bridging care with primary or specialty care providers (Bryant, Blake-Lamb, Hatoum, & Kotelcheck, 2016). More knowledge and evidence are needed about what strategies are effective to increase return rates for the postpartum visit to positively impact future interconception health. This is particularly relevant since local Medicaid/self-pay community clinics only have a 52% postpartum return rate.

Theoretical Framework

The Health Belief Model (HBM) is one of the most widely used models for understanding health behavior. This model was developed in the 1950s by United States Public Health Service social psychologists who wanted to improve the public's use of preventative services (Glanz, Burke, & Rimer, 2015; Garner, 2014). The theory suggests behavior depends on how much a person values a goal and on judgement that an action will achieve that goal. Initially, the model included four perceptions that served as the main constructs: perceived susceptibility or a person's subjective assessment of their risk of getting the condition, perceived severity or seriousness of a health condition and understanding of difficulties the condition will cause, perceived barriers or those that interfere with and facilitate adoption of a behavior such as side effects, time, and inconvenience, and perceived costs of adhering to the proposed interventions (Raingruber, 2016).

Janz and colleagues (1984) then modified the HBM to include responses to symptoms and illness which extended the model to include illness behaviors, preventative health, and health

screening. Other constructs were added including demographic variables, sociophysiological variables, perceived benefits or usefulness of a new behavior in decreasing the risk of developing a disease, perceived self-efficacy or ability to adopt the desired behavior, and cues to action or factors that instigate preventative health such as information provided (Janz & Becker, 1984). The HBM has been applied to a broad range of health behaviors and has also been evaluated with systematic reviews. A meta-analysis of 18 studies was conducted to determine whether measures of the HBM beliefs could longitudinally predict behavior (Carpenter, 2010). The meta-analysis suggested that benefits and barriers were consistently the strongest predictors, but perceived severity was only weakly predictive. They also reported that the length of time between measurement of the HBM beliefs and behaviors, prevention versus treatment behaviors, and drug-taking regimens versus other behaviors were identified as moderators of the HBM predictive power (Carpenter, 2010).

Jones, Smith, and Llewellyn (2014) also systematically reviewed the effectiveness of the health belief model interventions in improving adherence. In their review, 18 interventional studies were identified that described the use of the HBM in the design of an intervention to improve health care adherence. The majority (83%) achieved statistically significant improvements with 7 (39%) showing moderate to large effects. Studies using health-professional-led interventions most commonly reported significant improvement in adherence with large effects. Studies using written and audio material alone had greater impact on adherence behaviors than more complex interventions. The constructs most likely to be addressed were perceived benefits and perceived susceptibility, followed by perceived barriers. They concluded that interventions should be described in full to allow for the identification of effective components (Jones, Smith, & Llewellyn, 2014).

The HBM has also been used to evaluate different women's and children's health practices including childhood vaccines, breast self-examination, and decisions on mode of delivery. Smith et al. (2011) evaluated the HBM in relationship to delay or refusal of childhood vaccines. Their results suggested that compared with parents who did not delay or refuse vaccines, parents who did delay and refuse vaccines were significantly less likely to believe that vaccines are necessary to protect their children's health (70.1% vs. 96.2%), their child may get a disease if not vaccinated (71.0% vs. 90.0%), and vaccines are safe (50.4% vs. 84.9%). They recommended that families should be educated about American Academy of Pediatrics vaccination guidelines. This education can assist providers to convince parents who choose to delay or refuse vaccines to take another course of action for their child (Smith et al., 2011).

Another study focused on the role of different HBM components on the practice of breast self-examinations and breast cancer screening. Hajian-Tilaki and Audladi (2014) concluded that positive attitudes towards perceived benefits, perceived confidence/self-efficacy, and health motivation have a strong association with performing breast self-examinations. Other investigators explored factors influencing decisions made by women regarding their mode of delivery related to the HBM. Their analysis indicated that the constructs of the HBM including perceived benefits, perceived severity, and cues to action affected the decision that women make on their mode of delivery (Loke, Davies, & Sau-fun, 2015). This study supports educational programs to educate women on the benefits, risks, and severity of the two different modes of birth to help them be an active participant while still supporting the safe vaginal mode as indicated. They also reported that cues to action by healthcare providers can be helpful in the women's decision-making.

Thus, components of the HBM can be used in the implementation of health education by home visiting nurses, including sharing susceptibility and severity of illness related to the postpartum period and the many benefits of the 6-week postpartum visit to promote this preventative health behavior. This education can assist postpartum mothers to find value in the 6-week postpartum visit, positively impacting their decision to return for the visit. Removing barriers such as transportation issues can also make it easier and more convenient for the mothers. This can also increase their self-efficacy or ability to adhere to the visit. The home visiting nurses and schedulers can also be the cue to action to connect the mother with their provider and remind them about the visit, positively influencing them to return for their postpartum visit.

Assumptions

The assumptions for this project were that a postpartum 6-week visit is standard of care for obstetric patients, and all women have an appointment for their 6-week visit with their Obstetric provider that is either scheduled prenatally or during hospitalization. ACOG (2016) suggests that postpartum visits should be scheduled prenatally to assist with return rates. This was the practice at one of the community clinics where the patients are given an appointment at 36 weeks gestation. Most providers discussed the need for a 6-week postpartum during hospitalizations, but feedback from the home visiting nurse team indicated that many Medicaid or self-pay patients were not aware of the date of their 6-week postpartum appointment. Barriers reported by the home visiting nurse team included lack of knowledge about the 6-week postpartum visit, lack of perceived benefits and importance of the 6-week postpartum visit, disconnection with their OB provider, and lack of transportation to attend the visit. Another assumption was that all families from the local county who delivered at the facility were offered

a home visit during hospitalization prior to discharge by the program schedulers who visited the families in their postpartum room. They also all received a reminder letter about the home visit in the mail prior to their visit.

Project Question

The quality improvement project question was: Do planned improvement strategies of providing patient education, assuring transportation, and providing appointment reminders by a postnatal nurse home visiting program increase return rates for the 6-week postpartum visit?

Definition of Terms

The postpartum period is defined by the World Health Organization (2013) as the period from childbirth to the 42nd day following delivery. A postpartum visit is care provided in the period one to two hours after delivery of the placenta until six weeks with oversight needed in four general categories: complications, breastfeeding, postpartum depression, and sexuality and contraception (Blenning & Paladine, 2005). An unintended pregnancy is a pregnancy that is reported to have been either unwanted when no children or no more children were desired or mistimed, having occurred earlier than desired and associated with increased complications for the mother and infant (CDC, 2015).

Home visiting is defined as providing care in the home environment or place of residence of the patient and family. The home visiting program for the facility defines their home visit as an integrated home visit that includes a systematic assessment of family strengths, risks, and needs. The home visiting nurse conducts a home visit that is designed to make a connection with the family, assess health and psychosocial wellbeing, respond to a range of questions about postpartum and newborn care, and plan for connections in the community to provide support for the family (Family Connects, 2016).

Summary

ACOG (2016) reports that only 40% of women return for their 6-week postpartum visit, which is important for preventative care including reproductive planning and to promote interconception health and well-being. The return rates were only slightly higher at local Medicaid/self-pay community clinics. Strategies such as providing education, scheduling reminders, transportation, and home visiting programs have shown promise in improving return rates for the postpartum visit. This quality improvement project evaluated improvement strategies of providing patient education, ensuring transportation, and making reminder phone calls by a nurse home visiting program on return rates for the 6-week postpartum visit.

Chapter Two: Literature Review

Introduction

A comprehensive literature review was conducted using databases OVID, PubMed, and Cumulative Index to Nursing and Allied Health Literature (CINAHL) (see Appendix A). Search terms included “postpartum visits”, “postnatal follow-up”, “postpartum checkups”, “6-week postpartum visit”, “postpartum compliance”, “postnatal home visiting”, and “postpartum nurse home visits”. The literature review was performed to explore all relevant knowledge and research related to the 6-week postpartum visit to impact return rates, effects of not returning, and specific effects of postnatal nurse home visiting programs. The literature was narrowed to articles published in the last 10 years, the English language, and human subjects. Landmark or classic articles were also included if relevant. The initial yield was 399 articles in OVID, 110 articles in PubMed, and 14 articles in CINAHL for a total of 523. Duplicates, non-research, opinion, and non-applicable articles were excluded. After review of all the retrieved articles, 54 were identified to be significant for this quality improvement project. A literature matrix was also created for all the literature used in this project (see Appendix B).

Postpartum Visits

The postpartum period is critical for mothers since health problems commonly occur or become apparent in the weeks following birth (Yonemoto, Dowswell, Nagai, & Mori, 2015). For new mothers, these include postpartum hemorrhage, fever and infection, abdominal and back pain, abnormal discharge, thromboembolism, and urinary tract complications, as well as psychological and mental health problems such as postpartum depression (Bashour et al., 2008). Becoming a mother and having the responsibility for the well-being of an infant can be challenging, so mothers also need further support to reinforce education taught after birth,

establish exclusive breastfeeding, and cope as a new parent and woman after birth (Kronberg, Vaeth, & Kristensen, 2012). The postpartum period is also known as an optimal window of care and intervention for women with a need for women-centered care during the postpartum period (Verbiest, Bonzon, & Handler, 2016). Along with physically recovering from pregnancy and childbirth, women must redefine their sense of self including their body image, intimate relationships, and infant bonding while caring for themselves, their infant, and family members (Fahey & Shenassa, 2013). Fahey and Shenassa's Perinatal Maternal Health Promotion Model describes in detail the many skills a woman must develop to successfully adapt during the postpartum period such as mobilizing social support, developing positive coping skills and realistic expectations, and building self-efficacy.

One of the first studies to evaluate postpartum care utilization was by Lu and Prentice (2002) who conducted a survey describing the use and nonuse of the postpartum visit and the impact of the visit on breastfeeding duration. They reported that the quality and content of the postpartum visit may vary among providers, little information is known about the content of the visit, and not all women who receive a postpartum visit receive the counseling and services needed. They also found that women who had no prenatal care, less than a high school education, or a household income of < \$20,000 were at greatest risk for not returning for their postpartum visit, concluding that more research is needed to reevaluate the timing, content, and delivery of postpartum care (Lu & Prentice, 2002).

Another group conducted a retrospective, cohort analysis of claims data from a commercial health insurance plan and a Medicaid Managed Care Organization to compare primary care utilization following delivery between women with pregnancy complications and women without pregnancy complications (Bennett et al., 2013). Even though women with

pregnancy complications were more likely to attend the visit, overall visits were low, suggesting that despite pregnancy complications, which are known risk factors for diabetes and cardiovascular disease, women were not consistently following-up with primary care providers. They stated that predictors of receiving a postpartum visit included non-black race, older age, and history of preeclampsia, diabetes, and depression. They concluded that innovative models are needed after delivery to target women at higher risk for chronic disease development, particularly with the current Medicaid expansion opportunities (Bennett et al., 2013).

Several studies have investigated the barriers faced by women in returning for their postpartum visits. Bryant, Haas, McElrath, and McCormick (2006) studied variables associated with compliance to postpartum visits among low-income women in fourteen different sites in Healthy Start Project areas. Barriers found included unstable housing, transportation problems, and difficulties communicating with providers. They concluded that policies aimed at improving interconception care need to address access to care barriers. The Centers for Disease Control and Prevention (CDC), Division of Reproductive Health, also investigated the prevalence of the postpartum care visit using the national Pregnancy Risk Assessment and Monitoring Survey (PRAMS) among women with live born infants in 2004 (Chu, Callaghan, & Skapiro-Mendoza, 2007). They reported that even though they found that the overall prevalence of postpartum care visits was 89%, it was significantly lower in certain populations including women with 8 or fewer years of education (71%) and women who did not receive prenatal care (66%).

Recently in a large study, Morgan, Hughes, Belcher, and Holmes (2018) investigated risk factors associated with postpartum visit non-attendance as part of Maryland's Pregnancy Risk Assessment Monitoring System, including the evaluation of maternal sociodemographic characteristics and health behaviors. They reported that overall 89.6% attended their postpartum

visit, but found that being unmarried (OR 3.03, 95% CI 2.12-4.31), experiencing infant loss (OR 7.17, 95% CI 2.57-19.97), working during pregnancy (OR 0.44, 95% CI 0.31-0.63) and having no dental care (OR 2.03, 95% CI 1.43-2.88) were significant risk factors for non-attendance to the postpartum visit. In another recent study, Bocanegra et al. (2017) assessed racial/ethnic variation in receiving postpartum care among women in California. They reported that only 50% returned for a postpartum visit with significant racial/ethnic disparities seen among low-income mothers' likelihood to return for their postpartum visit and receive postpartum contraception. Moreover, black women had lower attendance rates to their postpartum visit and received less contraception as compared to white women (Bocanegra et al., 2017).

Henderson et al. (2016) also examined perception in low-income postpartum women regarding barriers and preferences for the timing and location of their postpartum visit to better understand and address deficits for delivering and utilizing postpartum care, focusing on provider practices and attitude for alternative approaches to the visit. Overall, women reported that care during the postpartum period was an important resource for them, but barriers to utilizing care were related to patient, physician, and system factors. However, both the postpartum women and their providers were receptive to exploring new practices that may increase access to postpartum care as well as contraception. They concluded that more flexible and convenient approaches in postpartum care with associated increased access to contraception may increase the likelihood that women will take advantage of these essential postpartum services (Henderson et al., 2016).

Several studies evaluated interventions to increase attendance to postpartum follow-up visits. Buckley (1990) studied women who gave birth in a Massachusetts perinatal facility and found that women who received education from a nurse practitioner were more likely to return

for the postpartum visit than women in the comparison group (85.3 and 52%, $p < 0.02$). Kabakian-Kasholian and Campbell (2005) specifically evaluated ways to increase use of postpartum visits and concluded that giving women appointments and written or verbal information about maternal health and postpartum visits increased their use of health services. Bryant et al. (2006) also found that women who received an appointment reminder were significantly more likely to attend their postpartum visit than women who did not receive a reminder (91.1 and 80.9%, aOR = 2.37 [1.40, 4.02]).

Lastly, the Centers for Medicare and Medicaid Services Maternal Infant Health Initiative (CHIP) (2015) developed a resource tool describing strategies that may be effective in increasing the postpartum visit rate and improving the content of the visit. Primary strategies involved engaging women in their care, redesigning the delivery system, using community supports, and aligning Medicaid, CHIP, and MCO policies. Examples of positive strategies included establishing prenatal partners that show women how to navigate the health system and develop their own prenatal and postpartum care plan, establishing Doula programs, providing prenatal and postpartum care information packets, using OB care managers for high risk mothers, implementing intensive community outreach programs, giving monetary incentives, and enhancing care management systems with outreach and educational activities, links to community services, and appointment assistance (CMS, 2015).

Home Visiting Programs

Home visiting programs continue to spread across the United States with a focus on improving maternal and infant health outcomes. A meta-analysis by Kendrick et al. (2000) provided empirical support for nurse home visiting achieving goals of providing emotional support for parents after birth, improving parenting behaviors, and connecting families with

individualized community resources which resulted in reducing emergency medical care. Dodge et al. (2014) also concluded that a brief, universal home-visiting program implemented with high penetration and fidelity can improve family outcomes and lower costly emergency care. They reported fewer infant emergency visits, more community connections, more positive parenting behaviors, and lower rates of anxiety in the study group as compared with control mothers. The facility's short-term, universal, postnatal home visiting program followed the guidelines of a similar model called the Family Connects program developed within the context of the Durham Family Initiative, funded by the Duke Endowment in 2002, with the primary goal of reducing community rates of child maltreatment (Family Connects, 2016; USDHS, 2016).

Family Connects (FC) is a model for a community-based home visiting program to support new parents in caring for their newborns and themselves. The FC model involves providing one to three home visits by a registered nurse to all families with newborns who live in a specified service area. During the initial home visit, the nurse conducts a physical health assessment of the mother and newborn, provides guidance on common care topics such as infant feeding and safe sleeping practices, and assesses family risks and needs. The risks and needs assessment covers 12 factors in four domains associated with mother and infant health and well-being (USDHS, 2016). The FC's Family Support Matrix addresses family health needs, childcare, parent-child relationship, household needs, safety, and parenting support (Family Connects, 2016). Specifically, the 12 factors that are assessed¹¹ include maternal health, infant health, health care plans, child care plans, parent and child relationship, management of infant crying, household safety/material supports, family and community safety, history with parenting difficulties, maternal wellbeing, substance abuse, and maternal emotional support.

Furthermore, if an assessment by the nurse indicates a risk or need, nurses directly support families or connect them to community resources, typically through telephone contacts and/or additional home visits. In cases of mild risk, nurses may provide direct support, such as feeding assistance or demonstration. If a family's risk is more significant, the nurse collaborates with the family to connect them to community services and supports. Supports may include intensive, targeted programs such as Healthy Start, Care Coordination for Children (CC4C), mental health services, public assistance agencies and programs, or other primary health care providers (USDHS, 2016). Nurses use a searchable database of local agencies, created by local program staff, to make needed referrals (Family Connect, 2016).

Home Visiting Programs and 6-week Postpartum Visits

A few studies described home visiting programs connecting women with their providers. Wager, Lee, Bradford, Jones, & Kilpatrick (2004) described a new program in South Carolina called the Postpartum/Infant Home Visit program that provided all Medicaid-eligible mothers and infants with at least one home visit by a nurse. They conducted a cost-benefit analysis of their program using both qualitative and quantitative methods. Their results suggested that the home visits were standardized, nurses were knowledgeable about resources and referrals, and overall, the program had a positive impact on the health and well-being of the mothers and infants including providing education and referring them to their physician or finding them a physician if needed (Wager et al., 2004).

Another group explored home visiting programs and adherence to the 6-week postpartum visit. Ghilarducci and McCool (1993) investigated the influence of a single postpartum home visit among low-income families within 2 weeks of the hospital discharge by a certified nurse midwife on returning for their postpartum visit, finding 74% of women returned for their visit in

the intervention group while only 58% returned in the control group ($p = 0.12$). Another home-based case management program for women who experienced adverse birth outcomes recruited women post-delivery and followed them until their next pregnancy (IHPI, 2003). They reported 72% of program participants attended their postpartum visit while only 51% of women who declined the home-based program attended the visit.

Gaps and Limitations

For this process improvement project, the literature was adequate regarding postpartum visits and evaluating different interventions on various groups to improve return rates for postpartum visits, but there were limited studies evaluating home visiting and postpartum visits. Stumbras, Rankin, Caskey, and Haider (2016) recently reviewed the evidence evaluating interventions in the antenatal and postnatal periods to increase adherence to the postpartum visit and found 12 statistically significant studies, but no intervention strategy was evaluated more than a few times, and many were relatively dated. Only limited studies evaluated the utilization of the postpartum visit along with clinical significance of the visit. There were also several excellent studies discussing the benefits of home visiting programs, but again, there was a noticeable gap in studies investigating the impact of home visiting programs on return rates for the 6-week postpartum visit. A majority of the literature, except for a few, though, was over 10 years old and significance was rarely reported. More research is needed to determine the effectiveness of home visiting programs on adherence to the 6-week postpartum visit.

Chapter Three: Methodology

Introduction

The purpose of this chapter is to discuss the project design, setting, sample, methods, human subject protection, instruments, data collection, data analysis, and project limitations. The goal of the project was to determine the impact of improvement strategies of providing patient education, assuring transportation, and providing an appointment reminder by a nurse home visiting program on return rates for the 6-week postpartum visit.

Design

The design was a performance improvement (PI) project using the rapid cycle improvement process of Plan, Do, Study, Act (PDSA) to develop strategies by home visiting nurses to improve adherence with the 6-week postpartum visit (see Figure 1 and 2, Appendix C). The PDSA method is one of the most common tools for process improvement and involves testing a change by planning it, trying it, observing the results, then acting on what is learned (USDHHS, 2011). Furthermore, the PI project outcomes were evaluated using a pretest and posttest design, comparing pre-implementation data with post-implementation data. This approach is described as determining a mean value through a pretest, implementing actions, calculating the posttest mean, then evaluating for significant differences between the means of the pretest and posttest (Aldrich & Cunningham, 2016).

Setting

The setting for the project was the facility and community where the Nurse Home Visiting program is located. The program, comprised of one nurse manager, nine nurses, and two schedulers, is a department in one of the largest birthing centers in North Carolina that is also the regional perinatal referral center for 20 counties in northwest North Carolina and is part of a

large, 923 bed community hospital that serves approximately 6400 mothers and infants each year. The project was approved by facility leaders (see Appendix D) and the facility community team. The county where the program is located has the second highest infant mortality rate of the five urban North Carolina counties (NCHHS, 2016). Healthcare disparities for this county and North Carolina continue to be a concern as racial and ethnic minorities are disproportionately impacted by pregnancy complications, preterm births, and infant mortality. Another setting for this project was the two local community clinics. The largest clinic is part of a 47,600-square-foot comprehensive outpatient clinic designed to meet the needs of a growing, increasingly diverse population. This obstetrics and gynecology community clinic provides postpartum care for Medicaid and self-pay mothers who account for 45% of the volume of mothers at the birthing center. The other obstetric clinic is a smaller community clinic that provides care to Medicaid and self-pay mothers, accounting for 5% of the patient volume at the birthing center.

Sample

The project team included the two schedulers, nine home visiting nurses, and the nurse manager for the home visiting program who implemented the project strategies for the sample. The sample includes all the Medicaid and self-pay mothers who agreed to receive a postpartum home visit at 2-3 weeks after discharge from the facility and received care at one of the two local community clinics.

Methods

An educational pamphlet about benefits of the postpartum visit was created by the DNP student using resources from the March of Dimes, Association of Reproductive Health Professionals (ARHP), and ACOG (ACOG, 2016; March of Dimes, 2014; ARHP, 2008). The pamphlet, “Your Six Week Postpartum Visit: It’s All About You”, in both English and Spanish,

described the importance of the 6-week postpartum visit and listed what to expect at the visit including the following categories: pregnancy problem, physical exam, mental health, birth control, breastfeeding, wellness care, and questions (see Appendix E). The pamphlets were vetted with the site champion and nurse home visiting team. They were also approved through the facility's Corporate Patient Education Council which included evaluation using the corporate literacy tool to ensure a six-grade reading level. After a few revisions of word choices, the tools were confirmed to be at a six-grade reading level.

All nine postnatal home visiting nurses and one nurse manager were educated by the DNP student at weekly huddles at the end of November and December 2017 using a PowerPoint presentation (see Appendix F) about the project goals, background, strategies planned, and steps in the new process, with a focus on the use of the educational pamphlet. The team was also taught to assess for transportation barriers during the home visit, and if a transportation barrier was found for the family, the nurse arranged transportation, either using the community clinic van or Medicaid transportation if the mother qualified for Medicaid. The education of the program schedulers was also completed and included the strategy of making reminder phone calls two days prior to the mother's scheduled 6-week postpartum visit. All team members signed a roster to document the completion of their project education.

Through the PDSA process, the home visiting nursing team requested the creation of a checklist with all steps of the new process listed to remind them what needed to be completed at the home visit and after the visit (see Appendix G). The checklist was printed on lavender paper for easy recognition and placed in the qualifying patients' folders. Team members checked off each box associated with each step as the steps of the process were completed. After the nurses completed the home visits, where they provided the 6-week postpartum visit education and

assured that the mother had transportation to their clinic, the checklist was placed in a folder in the schedulers' office. Next, after trialing ways to ensure the calls were not missed, the schedulers organized the folders by days of the week and place each sheet in the day the reminder call was due. The schedulers used the same lavender tool to record the outcome of their reminder phone call to the mother two days prior to the 6-week postpartum visit. Completed checklists were placed in a folder in the schedulers' office for the DNP student to pick up every two weeks.

The new strategies were implemented on January 2, 2018 and continued for three months until March 31, 2018. The DNP student met with the home visiting nursing team weekly at the Wednesday or Friday case conferences to discuss the new processes, obtain real-time feedback from team members, and determine if there were any barriers or team needs. The project processes were clarified as needed during the team meetings. Re-education of the team about the project processes was also completed in the team meeting as questions or concerns arose. The PDSA model was used throughout this quality improvement project. There was no costs or budget needed for the project since the purpose of the project matched the goals of this grant-funded home-visiting program and educational materials were already budgeted.

Protection of Human Subjects

This project was presented and approved at the facility's Nursing Research Council on September 26, 2017. The corporate proposal for improvement effort form was completed and submitted to the committee facilitator prior to presenting to the corporate committee (see Appendix H). The project was also submitted for approval through the facility IRB and was approved on October 13, 2017 (see Appendix I). Lastly, IRB approval request was submitted to the East Carolina University IRB, followed by their request for the student's facility to support

the project. The ECU IRB and facility IRB agreement form were executed after being signed by both parties on October 19, 2017 (see Appendix J). No identifying information was used in the data collection, paper, poster, presentation, or dissemination of this project. All materials and data were kept locked in the student's personal office in the facility with the only key in the possession of the student.

Instruments

A data collection tool was created to collect descriptive data and pre- and post-implementation 6-week postpartum visit rates to promote consistency of the chart reviews (see Appendix K). The data collection tool was used to collect data for both time periods including the first quarter of 2017 followed by the first quarter of 2018. As stated under methods, an educational pamphlet in both English and Spanish was created using recent literature to determine key points about the benefits of the 6-week postpartum visit and expectations for the visit (see Appendix E). A process checklist was also created for the nurse home visiting team to ensure all steps in the new process were completed by team members.

Data Collection

Using the data collection tool, descriptive data was collected by chart review in the electronic medical record to describe the population including the age, race, ethnicity, marital status, parity, payor, and obstetric (OB) provider group for mothers enrolled in the postnatal home visiting program. As described in the literature review, all these different patient variables can influence return rates for the 6-week postpartum visit. During January, February, and March of 2017, pre-implementation data for the 6-week postpartum return rates were collected by chart review in the electronic medical record for each woman enrolled in the program who were cared for at the local community clinics. Post-implementation data in January, February, and March of

2018 were also collected by the same method. The schedulers from the home visiting program provided a monthly list of patients to the student who were Medicaid or self-pay patients from the community clinics to identify which records needed to be reviewed for the 2017 pre-implementation data. For the 2018 post-implementation data, the lavender process checklists, that were placed in a folder in the scheduler's office, were gathered and used by the student to identify which records needed to be reviewed.

Data Analysis

To describe differences in the pre-implementation group and post-implementation group demographics, the Student's *t*-test for continuous variables and chi-squared test for categorical variables were used (IBM® SPSS® version 24). Statistical analysis of the 6-week postpartum visit return rates included running a two-tailed, one-sample *t*-test with a significance level of < 0.05. A one-sample *t*-test was chosen to allow comparison of a known mean (*M*) to a new mean after implementation of improvement strategies. The use of Student's *t* test assumes the underlying population is normally distributed and is distributed with $n - 1$ degrees of freedom (Witte & Witte, 2015).

Limitations

Limitations of this process improvement project included a small sample size, a convenience sample, and a single population in one community. Due to time limitations of the DNP program as well as the nurse visiting program's universal focus and guidelines, a control group was not feasible, so all Medicaid and self-pay patients visited by the nurse home visiting team received the three strategies to improve return rates for the 6-week postpartum visit in the first quarter of 2018. The population was limited to Medicaid and self-pay patients in just two community clinics due to inaccessibility to other electronic medical records (EMR) of other

clinics who did not have the same platform for their EMR as the facility. This prevented broadening the project scope of determining return rates at all local obstetric clinics serving both commercial and Medicaid/self-pay populations in the community. Lastly, improving postpartum return rates was an ongoing focus for other agencies in the community including the Pregnancy Medical Home program and the community clinics. Therefore, there was potential for other initiatives to have an impact on the project outcomes.

Chapter Four: Results

Introduction

The goal of this project was to determine the impact of improvement strategies of providing patient education, assuring transportation, and providing an appointment reminder by a nurse home visiting program on return rates for the 6-week postpartum visit. The nurse home visiting team who implemented the strategies for this project included two schedulers, one who was full time and another who was part-time, and nine full-time home visiting nurses. Two of the nurses did not participate in the implementation of strategies due to one team member resignation and one team member on FMLA during the implementation phase of the project. Of those team members, one scheduler was bilingual, and one nurse was bilingual, preventing any communication barriers with the mothers who were Spanish-speaking. There was also one full-time nurse manager for the home visiting program who assisted in ensuring all strategies were used by team members.

Demographics

There was a total of 303 postpartum mothers who qualified to participate in this project, with 172 mothers in the pre-implementation group and 131 mothers in the post-implementation group. Both groups agreed during their hospitalization after delivery to receive a postpartum home visit at 2-3 weeks after discharge from the facility. They also received their prenatal and postpartum care at the two local community clinics. Demographics for both samples and return rates were collected by chart review in the electronic medical record (see Appendix L). For the demographic results (see Table 1, Appendix M), the age range for the pre-implementation group was 16 – 46 years ($M = 27.8$, $SD = 6.4$). For the post-implementation group, the age range was 16 – 43 years ($M = 27.5$, $SD = 6.7$). In the pre-implementation group for race, 24 (14.0%)

mothers were Caucasian, 51 (29.7%) were African American, 3 (1.7%) were Asian, and 94 (54.7%) were other. In the post-implementation sample for race, 13 (9.9%) mothers were Caucasian, 38 (29.0%) were African American, 0 (0%) were Asian, and 80 (61.1%) were other. There were no differences in race ($p=.282$) between the pre- and post-implementation groups. In the pre-implementation group, 77 (44.8%) mothers were non-Hispanic and 94 (54.7%) were Hispanic. In the post-implementation group, 51 (38.9%) mothers were non-Hispanic and 80 (61.1%) were Hispanic. There were also no differences found in ethnicity between the pre- and post-implementation groups ($p=.388$).

Further, there were 121 (70.3%) single mothers and 51 (29.7%) married mother in the pre-implementation group, and 99 (75.6%) single mothers and 32 (24.4%) married mother in the post-implementation group, with no difference in groups for marital status ($p=.660$). There were 58 (33.7%) nulliparous mothers and 114 (66.3%) multiparous mothers in the pre-implementation group, and 48 (36.6%) nulliparous mothers and 83 (63.4%) multiparous mothers in the post-implementation group, with no differences found in the groups for parity ($p=0.438$). There were 165 (95.9%) Medicaid mothers and 7(4.1%) self-pay mothers in the pre-implementation group, and 125 (95.4%) Medicaid mothers and 6 (4.6%) self-pay mothers in the post-implementation group, with no differences found in the groups for payor ($p=.438$). Lastly, there were 155 (90.1%) mothers who received care at Community Clinic A and 17 (9.9%) mothers who received care at Community Clinic B in the pre-implementation group, and 116 (88.5%) mothers who received care at Community Clinic A and 15 (11.5%) mothers who received care at Community Clinic B in the post-implementation group. Again, there were no differences found in the groups for OB providers ($p=.660$).

Findings

There were three strategies used by the home visiting nurses to impact return rates for the 6-week postpartum visit. The first planned improvement strategy of providing patient education using an evidence-based teaching tool was completed by the home visiting nurses for all 131 (100%) mothers. For ensuring transportation, 125 (95.4%) mothers reported to their nurse that they had transportation available while 6 (4.6%) mothers needed transportation arranged for them, utilizing their appropriate clinic van. For the last strategy of calling the mother two days prior to the 6-week visit to remind them about their appointment, the schedulers spoke with 63 (48.1%) mothers directly or spoke with 6 (4.6%) family members ($p < .001$). The schedulers left messages due to no answer for 40 mothers (30.5%) and sent a text message due to no answering system to 16 (12.2%) mothers. Lastly, 6 (4.6%) mothers were not called due to the schedulers receiving the checklist from the nurses after the scheduled postpartum visit (see Figure 3).

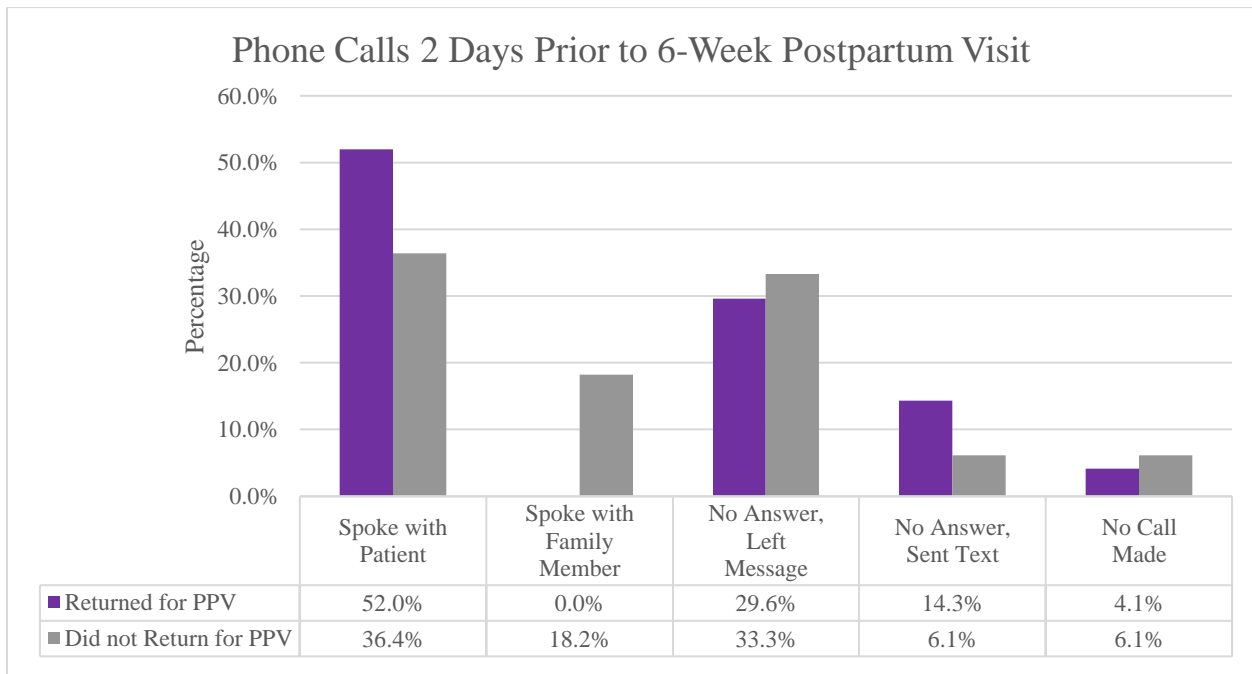


Figure 3: Results of phone call made two days prior to 6-week postpartum visit by schedulers, n=131

Adherence with the 6-week postpartum visit was collected by chart review in the electronic medical record by confirming a 6-week postpartum progress note in the mothers' EMR at the community clinic using Care Everywhere, Epic® Systems Corporation's point-to-point record exchange tool. In the pre-implementation group (n =172), 91 (52.9%) mothers returned for their 6-week postpartum visit. In the post-implementation group (n =131), 98 (74.8%) mothers returned for their 6-week postpartum visit which was a significant increase of 21.9% (p < .001; see Figure 4 and Figure 5).

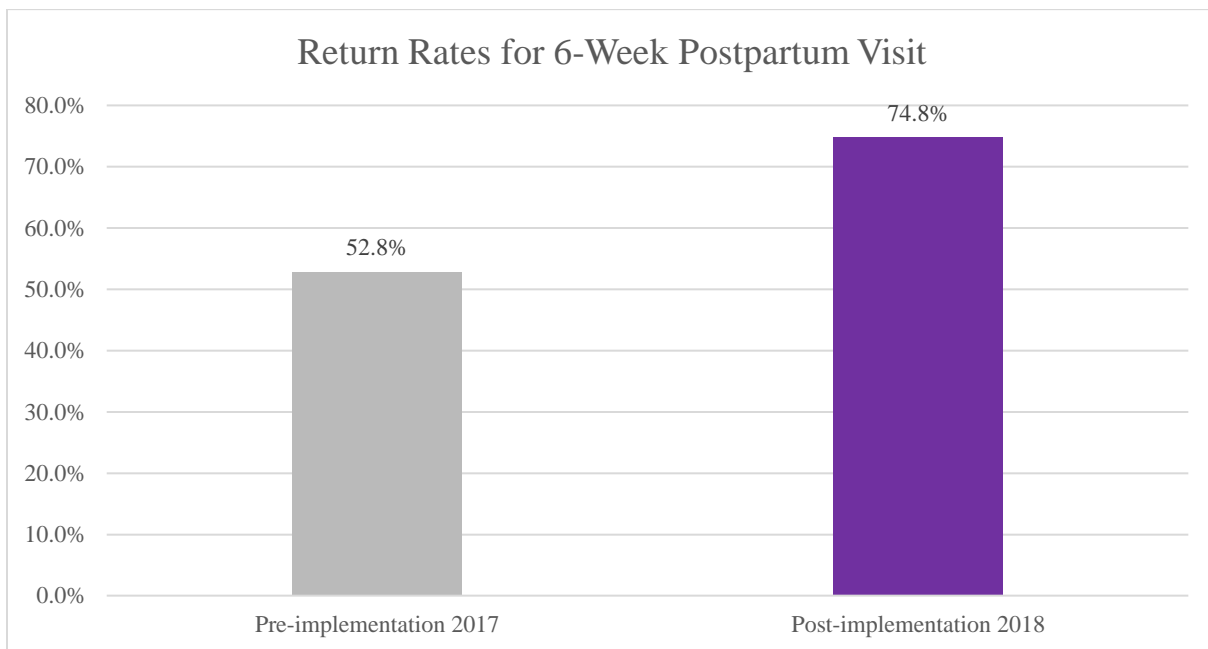


Figure 4: Percentage of mothers who returned for their 6-week postpartum visit pre and post implementation of strategies. N = 172 Pre-implementation, N= 131 Post-implementation

One-Sample Test

Test Value = 52.9

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Attended 6-week Visit	-1875.284	302	.000	-52.276	-52.33	-52.22

Figure 5: One-sample t-test comparing pre and post-implementation mean 6-week postpartum return rates

Feedback from Home Visiting Team

The nurse home visiting team provided feedback throughout this process improvement project at the weekly team meetings. Team members reported that the power point presentation increased their understanding of the project and importance of mothers returning for their 6-week postpartum visit. They expressed appreciation of having input into the project's implementation strategies. After implementing the process checklist, all team members stated that the tool was helpful in assisting them to remember all three strategies for qualifying patients, ensuring all steps in the process occurred at the time of the home visit as well as prior to the mother's 6-week home visit.

The Nurse Home Visiting team also found the teaching tool easy to use and reported receiving anecdotal positive feedback from mothers that it was easy to understand. They stated when reviewing the tool with mothers, it assisted them in highlighting the importance of the key components of the 6-week visit including transition to well woman care, reproductive planning and assessing for postpartum depression. They reported that some mothers voiced appreciation for the date and time of their 6-week postpartum appointment being written at the bottom of the tool to help remind them of their upcoming appointment since many had forgotten the date of their appointment. The nurse manager of the Nurse Home Visiting program, who performed a quarterly fidelity check on all home visiting nurses during the implementation phase, reported that all nurses utilized the checklist and educational tool appropriately, providing both education about the benefits of the 6-week postpartum visit and assessing for transportation barriers during their observed home visit.

Chapter Five: Discussion

Introduction

During the recovery period following childbirth, women are adapting to multiple physical, social, and psychological changes as they adjust to changing hormones and learn to feed and care for their newborn (ACOG, 2018). Tully, Stuebe, and Verbiest (2017) refer to this challenging time as the “fourth trimester” where women must deal with lack of sleep, fatigue, pain, breastfeeding difficulties, stress, new onset or exacerbation of mental health disorders, and lack of sexual desire. Despite all these challenges, many women do not return for their postpartum visit with as many as 40% not attending a postpartum visit (ACOG, 2016). At the local community clinics for this project, only 52.9% of women who agreed to participate in the nurse home visiting program, returned for their 6-week postpartum visit pre-implementation. Prior to the project, the nurse home visiting only inquired if the mother had a postpartum visit scheduled with their OB provider. The purpose of this quality improvement project was to increase return rates for the 6-week postpartum visit using improvement strategies of providing patient education, ensuring transportation, and providing reminder phone calls by a postnatal nurse home visiting program.

Implication of Findings

In this process improvement project, a gap in care was identified in the local community which was the underutilization of postpartum care. Return rates for postpartum visits are lowest among populations with limited resources such Medicaid and self-pay mothers as well as Hispanic and African American women, resulting in increased health disparities (Bennett et al., 2014; Bryant et al., 2006). Similar results were found in this project where only 52.9% of

Medicaid or self-pay mothers returned for their 6-week postpartum visit pre-implementation. For this group, 84.4% of the women were either Hispanic (54.7%) or African American (29.7%).

There were no significant differences in the characteristics of the pre-implementation and post-implementation groups, allowing for comparison of the different groups' 6-week postpartum visit return rates. The results of the project were positive with the 6-week postpartum return rates significantly increasing in the post-implementation group by 21.9% ($p < .001$) to 74.8%. This supports the Healthy People 2020 objectives of increasing the proportion of women who attend postpartum care visits. It also exceeds the Center for Medicaid and CHIP Services (CMCS) national maternal and infant health goal of increasing the postpartum visit rate by 10% in at least 20 states over a three-year period to promote healthier outcomes for Medicaid and CHIP enrollees (CMS, 2017).

This DNP project also potentially supports the Healthy People 2020 goal of decreasing unintended pregnancies. The goal of postpartum visits is enhancing women's transition to well woman care and includes preventative care such as establishing reproductive goals with access to effective contraception. Consequently, another positive result of increasing postpartum return rates is increasing birth spacing and decreasing unintended pregnancies. Nearly half of all pregnancies in the U. S. are unintended with associated risks of low birth weight, postpartum depression, delays in receiving prenatal care, and family stress (USDHHS, 2014). Racial and ethnic minority women experience higher rates of unintended pregnancies as compared to whites, leading to poor pregnancy outcomes and an estimated public expenditure nationwide of 21 billion dollars (Finer & Zolna, 2016; Jackson, Wang, & Morse, 2017).

Potential interventions in the postpartum period such as home visits, patient education, appointment scheduling strategies, changing timing of visits, telephone follow up, mail

reminders, child care provision, financial assistance, and transportation assistance all increased return rates for postpartum visits (Bryant, Haas, McElrath, & McCormick, 2006; Buckley, 1990; Ghilarducci & McCool, 1993; IHPI, 2003; Kabakian-Kasholian & Campbell, 2007; Stumbras et al, 2016). The strategies chosen for this process improvement project included a nurse home visiting program providing education, assuring transportation, and calling mothers two days prior to their 6-week visit, resulting in positive outcomes. Surprisingly, transportation was not as challenging as perceived initially by the nurse home visiting team with over 95% of the post-implementation group reporting that they had transportation to attend their visit. The results for the appointment reminder phone call, though, suggested that more mothers who spoke to the schedulers returned for their visit than those who were left a message or received a text message. In summary, the positive results of this project provide further support for these strategies to be used more broadly to increase return rates for the important 6-week postpartum visit.

The Health Belief Model (Janz & Becker, 1984) was the theoretical framework used for this project. Its component of influencing the perceived benefits or usefulness of a behavior was successfully utilized when the home visiting nurse provided patient education about the many benefits of the 6-week postpartum visit which promoted this preventative health behavior, resulting in the mother finding value in the visit. The home visiting nurse also assured that the mother had transportation, increasing their self-efficacy or ability to adhere to the visit. Lastly, the home visiting nurses and schedulers were successful in being the cue to action, another component of the HBM, by connecting the mother with their OB provider and reminding them about their visit date and time. This strategy also positively impacted return rates.

The American Association of Colleges of Nursing has created the Doctor of Nursing Practice (DNP) *Essentials of Doctoral Education for Advancing Nursing Practice* as the

foundational outcome competencies deemed essential for all graduates of DNP programs (AACN, 2006). This DNP project positively impacted the 6-week postpartum visit return rates at two community clinics, incorporating all eight DNP essentials throughout the process with the student demonstrating knowledge of each DNP essential (see Table 2, Appendix N). A DNP project timeline was also created and followed throughout the process (see Table 3, Appendix O).

Implications for the Nurse Home Visiting Program

Due to the positive feedback from patients and perceived benefits by team members, the Nurse Home Visiting team decided to continue using the 6-week postpartum visit teaching tool for all patients enrolled in the program, expanding it to commercial payor patients as well as the Medicaid and self-pay patients. The educational tool was incorporated into their standard processes. Based on team member feedback after using the teaching tool on multiple mothers, the tool was also updated to better highlight the date and time of the 6-week postpartum visit by enlarging the font and placing it at the top of the pamphlet. Due to the positive impact of the reminder phone calls, these were also continued by the team schedulers. Data collection was also continued to provide ongoing data to support sustainability of this grant-funded nurse home visiting program and demonstrate long-term community benefit. Lastly, the team decided that the checklist was no longer necessary as the strategies been incorporated into the overall processes of the nurse home visiting program.

Limitations

The time limitation of completing the project within program guidelines limited the number of patients in both the pre-implementation and post-implementation group. Being able to compare two complete years' data would have been advantageous to increase the size of both groups. There was also less number of patients in the post-implementation group due to having

one home visiting nurse resignation and one home visiting nurse on FMLA at the beginning of 2018, so less number of patients were visited in the first quarter of 2018. The weather in January 2018 may also have affected return rates when an ice storm in the area caused clinic closures for one week, negatively impacting return rates. Another limitation was the inability to control for variability in team members' teaching styles and the nurse-patient connection when discussing the importance of the 6-week postpartum visit with the patients. Establishing a positive nurse-patient relationship can further influence desired health behaviors.

Lastly, one barrier reported in the first two weeks of implementation by team members was remembering to return the checklist to the schedulers' office in a timely fashion for the schedulers to know when to make the phone call two days prior to mothers' 6-week postpartum visits. Due to human error, a few of the team members left the checklist on their desk until after the postpartum visit, resulting in six of the reminder phone calls being missed. After reeducation by the nurse manager and DNP student during team meetings, there were no further misses for the remainder of the project.

Delimitations

The project was limited to one specific county of North Carolina due to the approved scope of the nurse home visiting program grant. Patients in the surrounding counties who delivered at the facility were not offered a home visit, thus were not able to participate in the new strategies to improve return rates for the 6-week postpartum visit. This further limits the generalizability of the project. The project was also limited to only those mothers who were patients of two of the local Medicaid and self-pay obstetric community clinics. Those patients who received care at the community clinics with incompatible EMRs were excluded. All postpartum women with commercial insurance enrolled in the program were also excluded.

Recommendations

Simple strategies of providing education about the importance of the 6-week postpartum visit, ensuring transportation, and providing reminder phone calls by a nurse home visiting program significantly increased adherence to the 6-week postpartum visit. Other community clinics in surrounding counties could potentially benefit by implementing similar strategies to improve their return rates for postpartum visits with a focus on educating women about the importance of the visit as this was essential to the success of the project. When considering other strategies to implement, ensuring adequate resource allocation to support personal phone calls to the mother is important due the significant positive results found when speaking directly with the mother prior to her appointment as compared to other types of appointment reminder communication. Transportation barriers were not as significant as expected in this project but should still be considered since it is frequently reported in the literature as a barrier to adherence for the postpartum visit.

In a recent ACOG (2018) statement, new recommendations to optimize the health of women and children includes changing postpartum care to an ongoing process tailored to each woman's specific needs, using additional mechanisms for assessing needs after birth including home visits, phone support, text messages, and app-based support. They further recommend that all women have contact with their obstetric care provider within the first three weeks postpartum then conclude postpartum care with a comprehensive postpartum visit at 12 weeks after giving birth (ACOG, 2018). This change in scope of postpartum care, though, would require significant changes in state and federal reimbursement policies. In conclusion, alternative approaches that are flexible and convenient for women need to be a focus for future projects to further increase postpartum return rates, particularly for successful delivery of postpartum contraception

(Henderson et al., 2016). Ultimately, improving postpartum return rates can positively impact health prevention, wellness, and contraception use for the postpartum woman, leading to increased pregnancy spacing, prevention of unintended pregnancies, and successful transition to well woman care.

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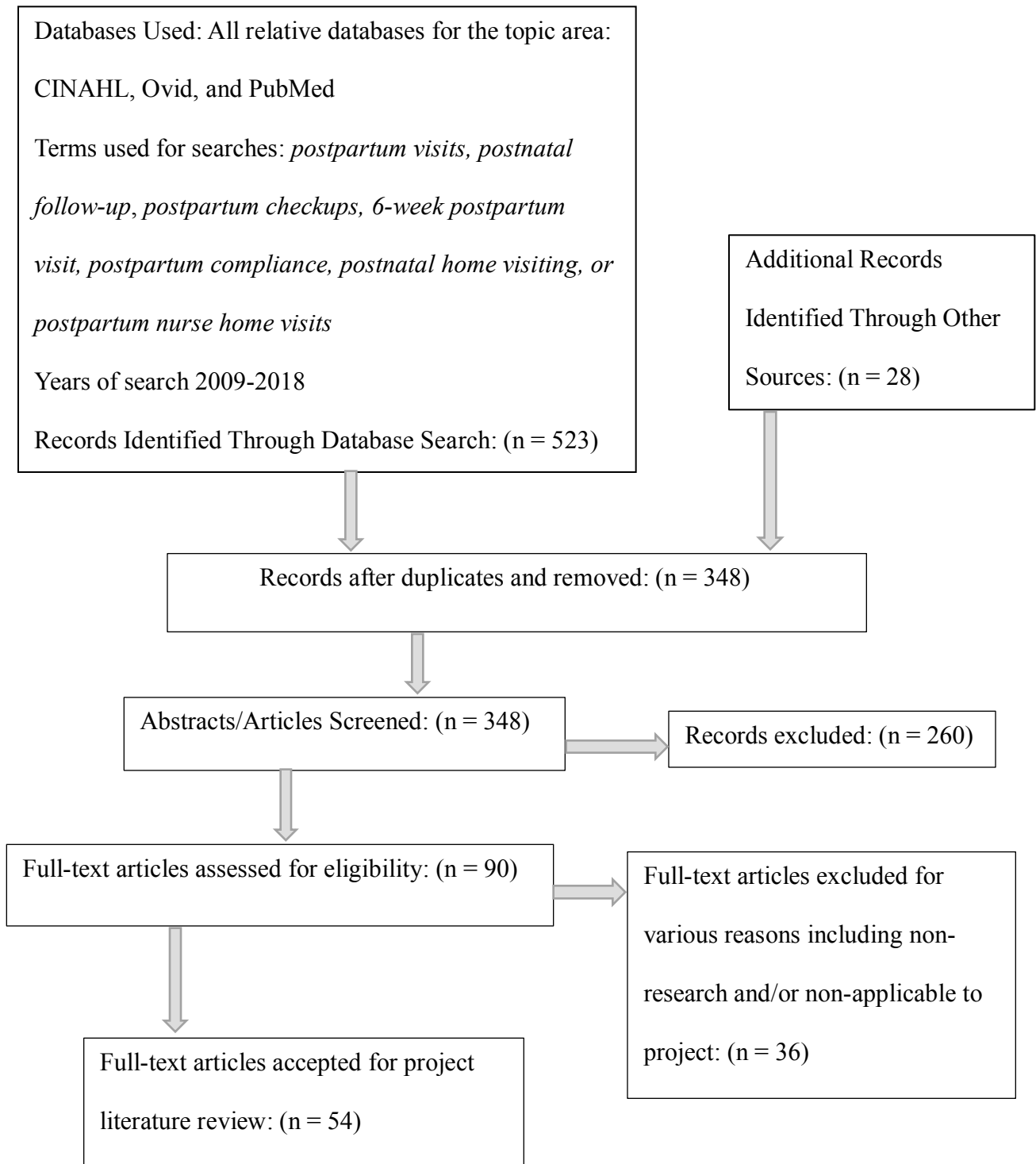
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Appendix A

Literature Search Strategies



Appendix B
Evidence Matrix
Evidence as the Basis for Practice Change

Student: Ann L. Smith	Course: DNP 4	Faculty Lead: Dr. Ann King	Date: Summer 2018	Project: Nurse Home Visiting Program and Postpartum Visits
Article (APA Citation)	Level of Evidence (I to VII)	Data/Evidence Findings	Conclusion	Use of Evidence in EBP Project Plan
Aldrich, J. O. & Cunningham, J. B. (2016). <i>Using IBM®SPSS® Statistics</i> (2 nd Ed). Thousand Oaks, California: SAGE Publications.	Level I	Textbook describing how to input data and analyze data from quality improvement and research projects.	Details of analysis clearly explained, great resource	Used for data entry and analysis for project
Alonso-Marsden, S., Dodge, K. A., O'Donnell, K. J., Murphy, R. A., Sato, J., & Christopoulos, C. (2013). Family risk as a predictor of initial engagement and follow through in universal nurse home visiting program to prevent child maltreatment. <i>Child Abuse and Neglect</i> , 37(8), 555-565.	Level IV	Program staff members were successful in scheduling 78% of eligible families for a visit and completing 85% of scheduled visits. Overall, 66% of eligible families completed at least one visit. Structural equation modeling (SEM) analyses indicated that high demographic risk and low infant health risk were predictive of scheduling a visit. Both low demographic and infant health risk were predictive of visit completion.	Findings suggest that while higher demographic risk increases families' initial engagement, it might also inhibit their follow-through. Additionally, parents of medically at-risk infants may be particularly difficult to engage in universal home visiting interventions. Implications for recruitment strategies of home visiting programs are discussed.	Use in a discussion of postnatal home visiting programs to support that these programs that produce positive effects in reducing child maltreatment as well as improving a range of child development and parenting outcomes. They are also popular with policy makers and

				funding agencies and are the focus of 1.5 billion dollars in federal funding as part of the 2010 health care legislation.
American College of Obstetricians and Gynecologist. (2018). Optimizing postpartum care. Committee Opinion No. 736. Obstetrics and Gynecology, 127, 187–92. Retrieved from http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Optimizing-Postpartum-Care	Level VII	To optimize the health of women, postpartum care is an ongoing process, rather than single encounter, with services and support tailored to women’s individual needs.	New recommendations are that all women have contact with their obstetric care providers within the first 3 weeks postpartum with the initial assessment followed up with ongoing care as needed, concluding with a comprehensive postpartum visit no later than 12 weeks after birth.	Committee opinion describes future recommendations
American College of Obstetricians and Gynecologist. (2016). Optimizing postpartum care. Committee Opinion No. 666. Obstetrics and Gynecology, 127, 187–92. Retrieved from http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Optimizing-Postpartum-Care	Level VII	Postpartum care is fragmented among pediatric and maternal health care providers. 40% of women do not attend a postpartum visit	To optimize care, anticipatory guidance should begin during pregnancy, a single healthcare practice should assume responsibility for coordinating care, all women should undergo a comprehensive postpartum visit within the first six weeks after birth	Committee opinion article, so provides support for importance of the 6-week postpartum visit and a resource to describe the problem, will use in background section

<p>Obstetric-Practice/Optimizing-Postpartum-Care</p>				
<p>Association of Reproductive Health Professional (2008). <i>Health Matters: Your Six-week Post-Partum Check-up</i> ACOG (2016). <i>Optimizing Postpartum Care</i>.</p>	<p>Level VII</p>	<p>After giving birth, stresses the importance of keeping health habits to stay on tract, guidance given for 6-week visit including weight loss, nutrition, exercise, physical exam, emotional adjustment, sexuality and contraception.</p>	<p>Goals for each category reviewed.</p>	<p>Use to help create the educational pamphlet</p>
<p>Bashour, H. N., Kharouf, M.H. M.H., Abdulsalam, A. A., El Asmar, K., Tabbaa, M. A., & Cheikha, S. A. (2008). Effect of postnatal home visits on maternal/infant outcomes in Syria: a randomized controlled trial. <i>Public Health Nursing</i>, 25 (2), 115-125.</p>	<p>Level II</p>	<p>A significantly higher proportion of mothers in home visiting group reported higher rates of exclusively breastfeeding than control groups. No other differences found.</p>	<p>While postpartum home visits significantly increased exclusive breastfeeding, other outcomes did not change.</p>	<p>Randomized control trial use for literature review about home visiting programs</p>
<p>Blenning, C. E. & Paladine, H. (2005). An approach to the postpartum office visit. <i>American Family Physician</i>, 72(12), 2491-2496.</p>	<p>Level VII</p>	<p>The postpartum period (typically the first six weeks after delivery) may underscore physical and emotional health issues in new mothers. Breastfeeding education and behavioral counseling may increase breastfeeding continuance. Postnatal depression screening tool may assist in diagnosing depression-related conditions. Physicians should also</p>	<p>A structured approach to the postpartum office visit ensures that relevant conditions and concerns are discussed and appropriately addressed.</p>	<p>Succinct overview of postpartum visits and provides definition of PPV and components of PPV, also support to why PPVs are essential</p>

		discuss contraception with postpartum patients, even those who are breastfeeding.		
Bennett, W. L., Chang, H, Levine, D. M., Wang, L., Neale, D., Werner, E. F., & Clark, J. M. (2013). Utilization of primary and obstetric care after medically complicated pregnancies: an analysis of medical claims data. <i>Journal of General Internal Medicine, 29</i> (4), 636-645.	Level IV	Women with a complicated pregnancy were older at delivery ($p<0.001$), with higher rates of C-section delivery ($p<0.0001$) and preterm labor or delivery ($p<0.0001$). Among the Medicaid, 56.6% in the complicated group and 51.7% in the comparison group attended a primary care visit. Predictors of receiving a visit included non-black race, older age, preeclampsia or DM, and depression.	Women with pregnancy complications were more likely to attend primary care visits post-delivery compared to the comparison group, but overall visits were low. Innovative models for preventative health services after delivery are needed to target women at higher risk for chronic disease development.	Large N, in US, included both complicated pregnancies and non-complicated, supports project and expands rational for strategies, include in predictors of attending PPV
Bocanegra, H. T., Brighton, M., Brads berry, M., Howell, M., Logan, J., & Schwartz, E. B. (2017). Racial and ethnic disparities in postpartum care and contraception in California's Medicaid program. <i>American Journal of Obstetrics and Gynecology, 217</i> (1), 47.e1-47.e7.	Level IV	Only one half of mothers attended a postpartum visit (49.4%) or received contraception (47.5%). Compared with white women, black women attended postpartum visits less often and were less likely to receive any contraception.	Significant racial/ethnic disparities exist among low-income California mothers' likelihood of attending postpartum visits and receiving contraception	Large study in California, low-income, support for factors effecting attendance to PPV, use in literature review
Bryant, A. S., Haas, J. S., McElrath, T. F., & McCormick, M. C. (2006).	Level VI	Study population consisted of survey respondents interviewed six weeks or more following delivery. Eighty-	This work finds that women with unstable housing, transportation barriers, and	Large amount of data from Healthy Start, use in section about

<p>Predictors of compliance with the postpartum visit among women living in healthy start project areas. <i>Maternal and Child Health Journal</i>, 10(6), 511-516.</p>		<p>five percent of respondents had had a PPV at time of interview. In a multiple regression analysis, enabling factors such as multiple moves (OR (95% CI)=0.34 (0.18, 0.67), trouble understanding the provider (OR (95% CI)=0.65 (0.43, 0.99)) and appointment reminders (OR (95% CI)=2.37 (1.40, 4.02)) were most strongly associated with a PPV.</p>	<p>difficulties communicating with providers are at risk for not receiving a PPV. This suggests that access to postpartum health services in the Healthy Start communities studied may not be entirely equitable. Policies aimed at improving interconception care will need to address these barriers to accessing health services.</p>	<p>predictors of compliance with PPV</p>
<p>Bryant, A., Blake-Lamb, T., Hatoum, I., & Kotelchuck, M. (2016). Women's Use of Health Care in the first 2 years postpartum: occurrence and correlates. <i>Maternal Child Health Journal</i>, 20, S81-S91.</p>	<p>Level VI</p>	<p>Of 6216 women studied, most (91 %) had had at least one health care visit in the window between 2 months and 2 years postpartum (the “late postpartum period”). The majority (81 %) had had a primary care visit. Factors associated with use of health care in this period included a chronic medical condition diagnosed prior to pregnancy (adjusted odds ratio (AOR) 1.42, 95 % CI [1.19, 1.71]), prenatal care received in an urban community health center (AOR 1.35 [1.06, 1.73]), having received obstetric (AOR 1.90 [1.51, 2.37]), primary (AOR 2.30 [1.68, 3.23]), or other non-primary outpatient care (AOR 2.35 [1.72, 3.39]) in the first 2 months postpartum, and living</p>	<p>Conclusions for practice among women already enrolled in a primary care practice at our medical center, health care utilization in the late postpartum period is high, but not universal. Understanding the characteristics of women who return for health care during this window, and where they are seen, can improve transitions of care across the life course and can provide opportunities for important and consistent interconception and well-woman messaging.</p>	<p>Large N, but only one facility, use to support strategies to improve return rates</p>

		closer to the hospital [AOR for residence >17.8 miles from the medical center (AOR 0.74 [0.61, 0.90])]. Having had an obstetrical complication did not increase the likelihood of receipt of care during this window.		
Buckley, H. B. (1990). Nurse Practitioner interventions to improve postpartum appointment keeping in an outpatient family planning clinic. <i>Journal of the Academy of Nurse Practitioners</i> , 2(1), 29-32.	Level III	A nurse practitioner (NP) program to improve postpartum appointment keeping in an outpatient family planning clinic is described and evaluated. Two groups were identified by convenience sampling: Group A ($n= 25$), the nonintervention group, and Group B ($n= 34$), the intervention group. Two types of intervention were used: a postpartum telephone call after discharge ($n= 11$), or a pre-discharge postpartum visit ($n= 23$).	Those in the intervention group were more likely to keep their appointments ($p < .02$); only the postpartum visit increased the probability of appointment keeping ($p < .05$).	Small study, use in support of strategies to increase return rates for PPV
Carpenter, C. J. (2010). A meta-analysis of the effectiveness of health belief model variable in predicting behavior. <i>Health Communication</i> , 25(8), 661-669.	Level II	18 studies, 2702, benefits and barriers were consistently the strongest predictors, length of time between measurement and the HBM beliefs and behaviors, prevention versus treatment behaviors, and drug-taking regimens versus other behaviors with identified as moderators of the HBM variables' predictive power.	HBM constructs vary in their effectiveness as predictors of behavior. Based on the weakness of two of the predictors, the continued use of the direct effects version of the HBM is not recommended.	Meta-analysis, use for literature review of theoretical model

<p>Centers for Disease Control and Prevention. (2015). <i>Reproductive Health: Unintended Pregnancy Prevention</i>. Retrieved from: https://www.cdc.gov/reproductivehealth/unintendedpregnancy/index.htm</p>	<p>Level VII</p>	<p>About 37% of births in the United States were unintended at the time of conception. The overall proportion unintended has not declined significantly since 1982. The proportion unintended did decline significantly between 1982 and 2006–2010 among births to married, non-Hispanic white women. Large differences exist between groups in the percentage of births that are unintended.</p>	<p>Unmarried women, black women, and women with less education or income are still much more likely to experience unintended births compared with married, white, college-educated, and high-income women. Also describes some alternative measures of unintended births that give researchers an opportunity to study this topic in new ways.</p>	<p>Online data from CDC to discuss the issue of unintended pregnancy rates related to consequences of missing the 6-week PPV</p>
<p>Centers for Medicare & Medicaid Services. (2017). <i>Maternal and Infant Health Care Quality</i>. Retrieved from https://www.medicare.gov/medicaid/quality-of-care/improvement-initiatives/maternal-and-infant-health/index.html</p>	<p>Level V</p>	<p>CMCS announced on July 18, 2014, created a new initiative (the Maternal and Infant Health Initiative) to improve maternal and infant outcomes in collaboration with our partners to improve the rate of postpartum visit by 10% and to increase the use of effective methods of contraception in women with Medicaid and CHIP.</p>	<p>Goal is to improve birth outcomes and reduce the costs of care for mothers and infants in Medicaid and CHIP.</p>	<p>Provides support for project, add to justification of project</p>
<p>Centers for Medicare & Medicaid Services. (2015). <i>Resources on Strategies to Improve Postpartum Care Among Medicaid and CHIP Populations</i>. Retrieved from https://www.medicare.gov/medicaid/quality-of-</p>	<p>Level V</p>	<p>To support states participating in the Postpartum Care Action Learning Series, the Centers for Medicare & Medicaid Services (CMS) developed a resource for strategies that may be effective in increasing the postpartum care visit rate and improving the content of the visit</p>	<p>Our primary drivers of postpartum care quality: engage women in their care, redesign the delivery system, identify community supports, and align Medicaid and CHIP and MCO policies</p>	<p>Multiple references about strategies to improve postpartum visit rates, support for strategies and use in literature review</p>

<p>care/downloads/strategies-to-improve-postpartum-care.pdf</p>		<p>among states' Medicaid and CHIP populations.</p>		
<p>Chu, S., Callaghan, W. M., Shapiro-Mendoza, C. K., Bish, C. L. (2007). Postpartum care visits - - 11 states and New York City, 2004. <i>Mortality and Morbidity Weekly Review</i>, 56(50), 1312-1316.</p>	<p>Level V</p>	<p>To estimate the prevalence of PPCVs among U.S. women who deliver live infants, CDC analyzed population-based 2004 data (the most recent data available) from 12 areas (11 states and New York City) participating in the Pregnancy Risk Assessment Monitoring System (PRAMS). This report summarizes the results of that analysis, which indicated that although the overall prevalence of PPCVs among U.S. women who deliver is high (89%), rates are significantly lower in certain population subgroups (e.g., 71% among women with ≤8 years of education and 66% among women who had not received prenatal care).</p>	<p>To help reach all population subgroups, the importance of the PPCV should be communicated to all women at the time of discharge from the hospital after delivery.</p>	<p>Systematic review, use in literature review to discuss overall rates and PRAMS</p>
<p>Dodge, K.A., Goodman, W.B., Murphy, R., O'Donnell, & Sato, J. M. (2013). Toward population impact from home visiting. <i>Zero to Three</i>, 33(3), 17-23.</p>	<p>Level II</p>	<p>RCT over an 18-month period, 4777 births, by 6 months Durham Connects infants had 18% fewer emergency room visits, 80% fewer overnight stays in hospital, 14% more community resources, more positive parenting behaviors, less maternal anxiety than controls. Cost analysis showed a benefit-cost ratio of \$3.02 so for every \$1 spent the</p>	<p>Home visiting programs can achieve a positive effect on the population and more funding should be approved.</p>	<p>Evidence to support the home visiting program and current model</p>

		home visiting program saved \$3.02 in cost for emergency care.		
Dodge, K. A., Goodman, W. B, Murphy, R. A., O'Donnell, K., Sato, J., & Guptill, S., (2014). Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting. <i>American Journal of Public Health</i> , 104(1), 136-143.	Level II	80% participation rate in home visiting program with an 84% adherence rate, 59% fewer infant emergency medical care episodes than controls, mothers reported more community connections, more positive parenting behaviors, participation in higher quality out-of-home child care, and lower rates of anxiety than control mothers.	A brief universal home-visiting program implemented with high penetration and fidelity can lower costly emergency medical care and improve family outcomes.	Well-designed study that supports a universal short-term home visiting program
Fahey, J., & Shenassa, E. (2013). Understanding and meeting the needs of women in the postpartum period: the perinatal maternal health promotion model. <i>Journal of Midwifery & Women's Health</i> , 58, 613-621.	Level VII	Presents the rationale for a health promotion approach to meeting the needs of women in the postpartum period and introduces the Perinatal Maternal Health Promotion Model. This conceptual framework is built around a definition of maternal well-being that asserts that health goes beyond merely the absence of medical complications.	In the model, the core elements of a healthy postpartum are identified and include not only physical recovery but also the ability to meet individual needs and successfully transition into motherhood. These goals can best be achieved by helping women develop or strengthen 4 key individual health-promoting skills: the ability to mobilize social support, self-efficacy, and positive coping strategies, and realistic expectations. While the model focuses on the woman, the health	Great overview of importance of postpartum care, important to include in literature review

			promotion approach considers that maternal health in this critical period affects and is affected by her family, social network, and community.	
Family Connects. (2016). Home, about, why it works, and FAQs. Retrieved from http://www.familyconnects.org/	Level VII	Overview of nurse home visiting program, gives details of model of care and process that the nurses follow.	Schematic of home visiting model, in use for over 10 years with good outcomes	Background information about the model of care for the short-term postnatal home visiting program
Finer, L. B. & Zolna, M. R. (2016). Decline in unintended pregnancy in the United States, 2008-2011. <i>New England Journal of Medicine</i> , 374(9), 843-852.	Level V	Less than half (45%) of pregnancies were unintended in 2011, as compared with 51% in 2008. The rate of unintended pregnancy among women and girls 15 to 44 years of age declined by 18%, from 54 per 1000 in 2008 to 45 per 1000 in 2011. Rates of unintended pregnancy among those who were below the federal poverty level or cohabiting were two to three times the national average. Across population subgroups, disparities in the rates of unintended pregnancy persisted but narrowed between 2008 and 2011; the incidence of unintended pregnancy declined by more than 25% among girls who were 15 to 17 years of age, women who were cohabiting, those whose incomes	After a previous period of minimal change, the rate of unintended pregnancy in the United States declined substantially between 2008 and 2011, but unintended pregnancies remained most common among women and girls who were poor and those who were cohabiting.	Recent article discussing unintended pregnancy rates, use in introduction to support why PPV is important related to reproductive counselling

		were between 100% and 199% of the federal poverty level, those who did not have a high school education, and Hispanics.		
Garner, D. B. (2014). (2014). Theories from the behavioral sciences. In M. Mcewen & E. M. Wills (Eds.), <i>Theoretical Basis for Nursing</i> (pp 305-330). Philadelphia, PA: Wolters Kluwer Health.	Level VII	Reference textbook that clearly list components of HBM, schematic of HBM	Overview of the HBM	Background for HBM, use to describe components of Health Belief Model
Ghilarducci, E., & McCool, W. (1993). The influence of post-partum home visits on clinic attendance. <i>Journal of Nurse-Midwifery & Women's Health</i> , 49(3), 152-158.	Level IV	25% of the clients who did not receive home visits and 74% of the home-visited clients kept their 6-week appointment, but not significant. Home-visited clients missed and were rescheduled for fewer 6-week appointments than those that did not receive home visits. After controlling for age and parity, results were significant.	Home visitation enhances a client's connectedness with the health care system and thus lessens the number of missed appointments for the six-week postpartum visit.	Small study, provides support for strategies in project to improve return rates for 6-week visit.
Glanz, K., Burke, L. E., & Rimer, B. K. (2015). Health behavior theories. In J. B. Butts & K. L. Rich (Eds.), <i>Philosophies and Theories for Advanced Nursing Practice</i> (pp. 235-256).	Level VII	Textbook of philosophies and theories that give history and description of the HBM as well as application	Health motivation is its central focus, so it is a good fit for addressing problem behaviors that evoke health concerns, supports applying the HBM to planning health programs	Provides information on chosen theoretical model for the project

Burlington, MA: Jones & Bartlett Learning.				
Hajian-Tilaki, K. & Auladi, S. (2014). Health belief model and practice of breast self-examination and breast cancer screening in Iranian women. <i>Breast Cancer, 21</i> , 429-434.	Level VI	Average scores in domains of perceived benefit, self-efficacy, and health motivation were significantly higher among those who perform breast self-examination, breast clinical examination, but not mammography.	Positive attitudes towards perceived benefits, perceived confidence/self-efficacy, and health motivation have a strong association with performing BSE and BCE but varies based on culture.	Study done in Iran, evidence for application of the HBM and women's health behavior, can use in literature review
Henderson, V., Stumbras, K., Caskey, R., Haider, S., Rankin, K., & Handler, A. (2016). Understanding factors associated with postpartum visit attendance and contraception choices: listening to low-income postpartum women and health care providers. <i>Maternal Child Health Journal, 20</i> , S132-S143.	Level VI	Women believe that receiving care during the postpartum period was an important resource for monitoring physical and mental health and strongly supported provision of contraception earlier than the 6-week post-partum visit.	Approaches that increase the flexibility and convenience of postpartum care and the delivery of postpartum contraception may increase the likelihood that women will take advantage of essential postpartum service.	Qualitative study, provides support for project and will add to background information
Interconception Health Promotion Initiative & The Research and Evaluation Group, University of Colorado. (2003). <i>Interconception Health Promotion Initiative Final Report</i> . The Colorado Trust. Retrieved from	Level III	Compared to qualified women who declined the program, women who participated were more likely to follow through on their post-partum care and birth control use after the index birth (72%). In addition, they had a longer interconception period than the women who declined to participate. Their subsequent babies	Women who participate in a comprehensive home visitation and case management program after a poor outcome birth have higher rates of compliance with post-partum care and family planning. They seem have longer interconception	Support for home visiting program and return rates, use in literature review

<p>http://www.coloradotrust.org/sites/default/files/IHPIFinalReport04.pdf</p>		<p>were heavier, less likely to be low birthweight, less likely to require a stay in the NICU.</p>	<p>intervals and better outcomes as measured by NICU admission and cumulative low birthweight rates.</p>	
<p>Jackson, A. V., Wang, L., & Morse, J. (2017) (in press). Racial and ethnic differences in contraception use and obstetric outcomes: a review. <i>Seminars in Perinatology</i>. Retrieved from</p>	<p>Level V</p>	<p>In the United States, racial and ethnic minority women experience higher rates of contraceptive non-use, failure, unintended pregnancy, and lower use of long-acting reversible contraception (LARC), compared to whites. Simultaneously researchers have found that unintended pregnancy is associated with poor pregnancy outcomes and pregnancy behaviors, including pre-term birth and late initiation of prenatal care, respectively.</p>	<p>Due to the association of pregnancy intention and obstetrical outcomes, public health efforts have focused on the increase in contraception use among these populations to decrease poor pregnancy outcomes.</p>	<p>Recent review (in press) of contraceptive use, non-use and discontinuation and unintended pregnancy. Use in introduction and literature review</p>
<p>Janz, N. K. & Becker, M. H. (1984). The health belief model: a decade later. <i>Health Education Quarterly</i>, 11(1), 1-47. Retrieved from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/66877/10.1177109019818401100101.pdf</p>	<p>Level V</p>	<p>Overview of how the HBM has been used to explain and predict a variety of behaviors associated with positive health outcomes</p>	<p>Multiple studies identified and replicated to support use of HBM to change health behavior</p>	<p>Original article describing the HBM, use in literature review for my theoretical model</p>
<p>Jones, C. J., Smith, H., & Llewellyn, C. (2014). Evaluating the effectiveness of health belief model</p>	<p>Level II</p>	<p>Of 18 studies, 14 (78%) reported significant improvements in adherence, with 7 (39%) showing moderate to large effects. Only 6</p>	<p>To facilitate better understanding and methodological rigor, interventions should be</p>	<p>Systematic review, use in literature review discussing HBM in</p>

<p>interventions in improving adherence: a systematic review. <i>Health Psychology Review</i>, 8(3), 253-269.</p>		<p>studies used HBM in its entirety and 5 different studies measured health beliefs as outcomes</p>	<p>described in full to allow for the identification of effective components.</p>	<p>general in relation to lack of adherence</p>
<p>Kabakian-Khasholian, T. & Campbell, O. M. R. (2005). A simple way to increase service use: triggers of women's uptake of postpartum services. <i>International Journal of Obstetrics and Gynecology</i>, 112, 1315-1321.</p>	<p>Level II</p>	<p>Multivariable analysis with adjusted ORs show that women given an appointment for their postpartum visit were more likely to having had that visit (OR= 6.8, 95% CI 6.2-7.4). In the absence of such an appointment, university education (OR = 3.6, 95% CI 2.6-4.7), information on maternal health (OR = 4.9, 95% CI 4.0-5.8) and intervention booklet (OR = 2.9, 95% CI 2.0-3.9) were important determinants of a postpartum visit</p>	<p>Giving women appointments for postpartum visit or written or verbal information on maternal health can increase their use of health services</p>	<p>Describes simple ways to increase return rates for the 6-week PPV, 450 in study, study done in Lebanon, can use in background and in support of strategies</p>
<p>Kendrick, D., Elkan, R., Hewitt, M., Dewey, M., Blair, M., Robinson, J., Williams, D., & Brummell, K. (2000). Does home visiting improve parenting and the quality of the home environment? A systematic review and meta-analysis. <i>Archives of Diseases in Childhood</i>, 82(6), 443-451. doi.10.1136/adc.82.6.443</p>	<p>Level I</p>	<p>17 studies reported home observation for measurement of the environment, 27 reported other measures of parenting and 10 reported types of outcomes, 12 entered in met-analysis, showed a significant effect of home visiting on home environment</p>	<p>Home visiting programs were associated with an improvement in the quality of the home environment.</p>	<p>Evidence in support of home visiting programs</p>

Kronborg, H., Vaeth, M., and Kristensen, I. (2012). The effect of early postpartum home visits by health visitors: a natural experiment. <i>Public Health Nursing, 29</i> (4), 289-309.	Level IV	No differences in breastfeeding duration between the two periods seen, but unvisited mothers had shorter durations of full breastfeeding than comparison group ($p < 0.005$). Mothers reported a significantly higher use of medical services during the no visiting period and missed out on guidance on all areas of the health service visits.	Nonstandardized home visits by health visitors were associated with longer breastfeeding duration, postnatal visits depended on parity and unmet needs increased the use of medical services.	Study in Denmark, provides support for home visiting programs
Levine, L. D., Nkonde-Price, C., Limaye, M., & Srinivas. (2016). Factors associated with postpartum follow-up and persistent hypertension among women with severe preeclampsia. <i>Journal of Perinatology, 36</i> , 1079-1082.	Level V	6-week follow-up rate was 52.3%. Factors associated with decreased follow-up were African-American race (OR 0.37 (0.18-0.77)) and <5 prenatal visits (OR 0.44 (0.20-0.97)). Women with diabetes and women with a cesarean had higher follow-up (OR 4.00 (1.09-14.66) and 2.61 (1.40-4.88). Among those with 6-week follow-up, 21% had persistent hypertension.	Identified a subgroup of women at higher risk for poor postpartum follow-up and those at risk for persistent hypertension	Address the high-risk group of women with preeclampsia and what influences their return rates, supports population group on QI project
Loke, A. Y., Davies, L., & Sau-fun, L. (2015). Factors influencing the decision that women make on their mode of delivery: The Health Belief Model. <i>BMC Health Services Research, 15</i> , 274-285.	Level VI	22.9% preferred a C-section (CD) delivery because they were concerned about being pregnant at an advanced age, worried about labor pain and perineum tearing, wanted to have a better plan for maternity leave, and perceived it more convenient. The perceived benefits and severity of a vaginal	Data indicated that the constructs of the HBM – perceived benefits, perceived severity, and cues to action – affect the decision that women make on their mode of delivery. There is value in designing education programs to educate women	Good overview of HBM and how it affects decision making for women, support for theoretical model

		birth and the perceived benefits, severity, and cues to action of CD affected the decision to undergo a VB or CD.	and have them be active participants in choosing.	
Lu, M. C., & Prentice, J. (2002). The postpartum visit: risk factors for nonuse and association with breast-feeding. <i>American Journal of Obstetrics and Gynecology</i> , 187, 1329-1336.	Level V	Fifteen percent of respondents had not made a postpartum visit within 6 months after delivery. Having no prenatal care was associated with increased likelihood of nonuse of postpartum care (adjusted relative risk 3.39, CI 1.98-5.81). The postpartum visit was not significantly associated with breast-feeding duration.	Further research is needed to reevaluate the timing, content, and delivery of postpartum care.	Large N, systemic review, use in introduction and literature review related to return rates for the postpartum visit
March of Dimes. (2014). <i>Your Postpartum Checkup</i> . Retrieved from http://www.marchofdimes.org/pregnancy/postpartum-care.aspx	Level VII	Describes postpartum check-up, what happens at the postpartum checkup: talk about birth control, questions about problems during pregnancy, labor, and birth, feelings or concerns about being a new mom, check other health conditions, physical exam, pelvic exam, and vaccinations.	Designed as patient education with key points clearly listed.	Use to help create patient education pamphlet
Morgan, I., Hughes, M. E., Belcher, H., & Holmes, L. (2018). Maternal sociodemographic characteristics, experiences and health behaviors associated with postpartum	Level IV	89.6% of women reported attending postpartum visit, bivariate analysis between maternal sociodemographics and health behavior characteristics and non-attendance to visit indicated that that being unmarried (OR 3.03, 95% CI	Mother who experienced an infant death were at the greatest risk for not attending a postpartum visit, need to establish support networks including grief counseling and service reminders	Recent study looking at risk factors associated with not receiving a visit, limited because it uses self-report from

<p>care utilization: evidence from Maryland PRAMS dataset, 2012-2013. <i>Maternal and Child Health Journal</i>, 22(4), 589-598.</p>		<p>2.12-4.31), had infant loss (OR 7.17, 95% CI 2.57-19.97), worked during pregnancy (OR 0.44, 95% CI 0.31-0.63) and no dental care (OR 2.03, 95% CI 1.43-2.88) as significant risk factors for non-attendance. After controlling for known and theoretical confounders, experiencing an infant loss (aOR 5.18, 95% CI 1.54-17.4), not receiving dental care (aOR 1.54, 95% CI 1.06-2.26) and working during pregnancy (aOR 0.61, 95% CI 0.41-0.93) emerged as strong predictors of PPV non-attendance.</p>		<p>mother, use in literature review</p>
<p>National Committee for Quality Assurance. (2015). <i>The State of Health Quality Report</i>. Retrieved from http://www.ncqa.org/report-cards/health-plans/state-of-health-care-quality</p>	<p>Level V</p>	<p>NCQA reports postpartum care utilization rates from claims and MR reviews, in 2014, 61.8% of Medicaid recipients had a postpartum visit as compared to 76.9% of commercial pay mothers.</p>	<p>Medicaid patient's PPV rates are lower than those with insurance, help to focus efforts to improve maternal and infant outcomes.</p>	<p>Shares data concerning Medicaid patients, supporting population in project, use to describe problem</p>
<p>Nkwabong, E., Ilue, E. E., & Bisong, C. E. (2015). Factors associated with poor attendance at the postpartum clinic six weeks after delivery in Cameroon. <i>International Journal of Gynecology and Obstetrics</i>, 129, 248-250.</p>	<p>Level IV</p>	<p>Among the 120 women, 85 (70.8%) did not attend the 6-week postpartum visit clinic, compared with women who did attend the 6-week visit, those that did not attend delivered vaginally, had no complications, and had not been counseled to attend the visit ($P < 0.001$ for all).</p>	<p>Benefits of attending the 6-week postpartum visit should be emphasized especially to women who experienced uncomplicated vaginal deliveries</p>	<p>Good overview of the PPV and reasons why patients did not attend, small study, in Cameroon, so limited, use to discuss reasons for non-compliance and support for strategies</p>

<p>North Carolina Health and Human Services (2016), <i>North Carolina Center for Health Statistics</i>. Retrieved from: http://www.schs.state.nc.us/data/vital/ims/2014/2014rpt.html</p>	Level VII	Large data table showing North Carolina State's statistics regarding infant mortality, includes variables related to mortality	Forsyth County infant mortality rates 2 nd highest in North Carolina	Use in description of setting
<p>Raingruber, B. (2016). <i>Contemporary Health Promotion in Nursing Practice</i>. Burlington, MA: Jones and Bartlett Learning.</p>	Level VII	Overview of Health promotion theories and history of the Health Belief Model	Describe the four constructs of HBM and application of the model	Use in background information and history about HBM as well as definitions
<p>Smith, P. J., Humiston, S. G., Marcuse, E. K., Zhao, Z., Dorell, C. G., Howes, C., & Hibbs, B. (2011). Parental delay or refusal of vaccine doses, childhood vaccination coverage at 24 months of age, and the health belief model. <i>Public Health Reports</i>, 2(126), 135-146.</p>	Level V	Compared with parents who neither delayed nor refused vaccines, parents who delayed and refused vaccines were significantly less likely to believe that vaccines are necessary to protect the health of children (70.1% vs. 96.2%), that their child might get a disease if they aren't vaccinated (71.0% vs. 90.0%), and that vaccines are safe (50.4% vs. 84.9%). Children of parents who delayed and refused also had significantly lower vaccination coverage for nine of the 10 recommended childhood vaccines including diphtheria-tetanus-acellular pertussis (65.3% vs.	Parents who delayed and refused vaccine doses were more likely to have vaccine safety concerns and perceive fewer benefits associated with vaccines. Guidelines published by the American Academy of Pediatrics may assist providers in responding to parents who may delay or refuse vaccines.	Good overview of the health belief model and how evidence for its use, include in review of theoretical framework

		85.2%), polio (76.9% vs. 93.8%), and measles-mumps-rubella (68.4% vs. 92.5%). After adjusting for sociodemographic differences, we found that parents who were less likely to agree that vaccines are necessary to protect the health of children, to believe that their child might get a disease if they aren't vaccinated, or to believe that vaccines are safe had significantly lower coverage for all 10 childhood vaccines.		
Stumbras, K., Rankin, K., Caskey, R., & Haider, S. (2016). Guidelines and intervention related to the postpartum visit for the low-risk postpartum women in high and upper middle-income countries. <i>Maternal Child Health Journal, 20</i> , S103-S116.	Level V	Review located 8 guidelines which all relied on expert opinion/group consensus as the evidence for their recommendations regarding the timing of the PPV, 19 intervention studies focused on increasing use of the PPV, 12 were statistically significant, but no intervention strategy was evaluated more than a few times, and many were dated	Guidelines for the timing of the postpartum visit are variable and are typically based on weak evidence, but support for more flexibility, future initiatives should focus on more rigorous evaluation	Good synthesis of different studies on interventions related to the PPV, provides support for interventions and need for more studies/projects
Tully, K. P., Stuebe, A. M., & Verbiest, S. B. (2017). The fourth trimester: a critical transition period with unmet maternal health needs. <i>American Journal of Obstetrics and Gynecology, 217</i> (1), 37-41.	Level IV	After childbirth, women are not scheduled for follow-up care for 6 weeks, poorly attended visits. New mothers feel unprepared for the common health issues and are uncertain of whom to contact. To improve care, the 4 th Trimester Project brings together mothers,	Four major topic areas emerged: (1) intense focus on women's health prenatally is unbalanced by infrequent and late postpartum care; (2) medical practice guidelines do not align with women's	Overview of 4 th trimester to use in discussion of final chapter, support for future recommendations

		health care providers, and stakeholders to explore what families need most from birth to 12 weeks postpartum.	experiences and constraints; (3) validation of women as experts of their infants and elevating their strengths as mothers is necessary to achieve health goals; and (4) mothers need comprehensive care, which is difficult to provide because of numerous system constraints.	
U. S. Department of Health and Human Services Health Resources and Services Administration. (2011). <i>Testing for Improvement</i> . Retrieved from https://www.hrsa.gov/quality/toolbox/508pdfs/testingforimprovement.pdf	Level VII	Review of the most common tools for improvement is the Deming (or Shewhart) Cycle. This method is also known as Plan-Do-Check-Act (PDCA) or Plan-Do-Study-Act (PDSA), and it is well suited for many improvement projects. The PDSA cycle is shorthand for <i>testing a change</i> - by planning it, trying it, observing the results, and acting on what is learned.	This is the scientific method used for action-oriented learning.	Evidence for quality improvement model, use in methodology and design
U.S. Department of Health and Human Services. (2014). <i>Healthy People 2020, Objective FP-5 and MICH-9</i> . Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives	Level VII	Healthy People 2020 states that improving the well-being of mothers, infants, and children is an important public health goal for the U.S.	Significant health disparities and social determinants of health also effect pregnancy outcomes and infant health, goal improved pregnancy planning and spacing, prevent unintended pregnancy, health promotion and disease prevention important, goal to increase	Provides support for project and why focus on 6-week visit and unintended pregnancy rates

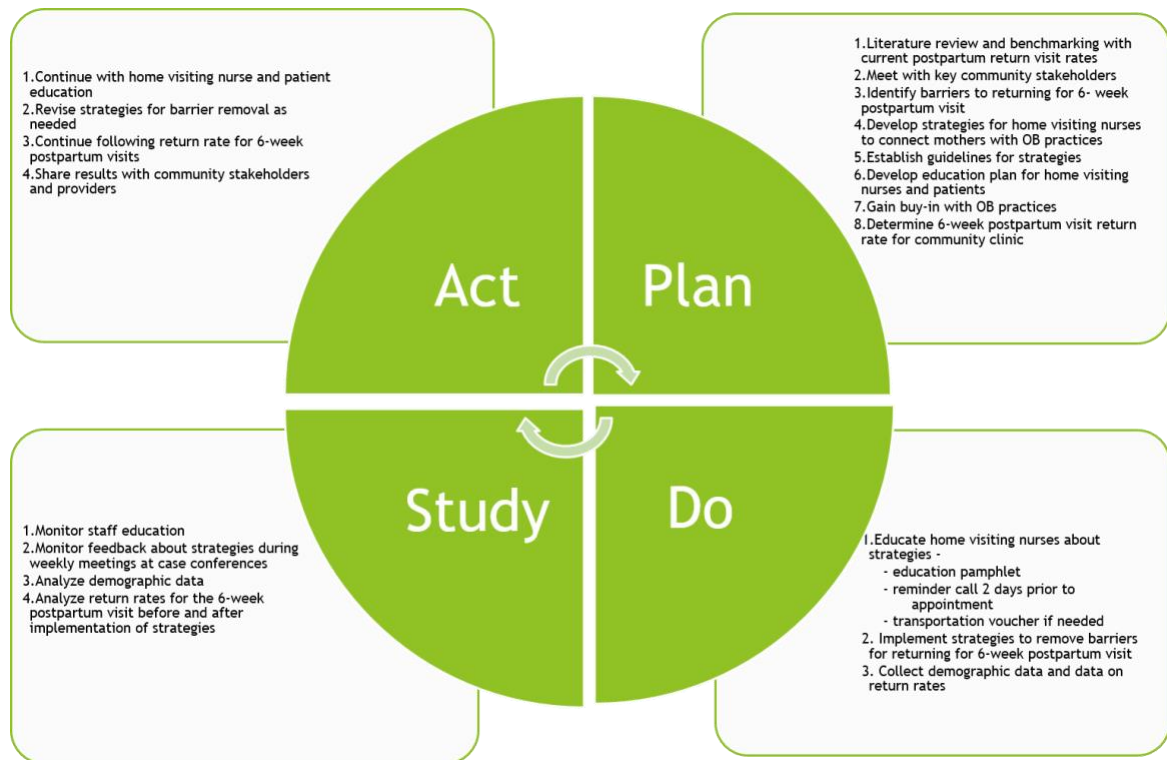
			attendance to the 6-week postpartum visit.	
U.S. Department of Health and Human Services. Administration for Children & Family. (2016). <i>Home visiting evidence of effectiveness: implementing Family Connects</i> . Retrieved from http://homvee.acf.hhs.gov/Implementation/3/Durham-Connects-Family-Connects-Program-Model-Overview/59	Level VII	Detailed description of the model for the Nurse Home Visiting program at the facility	Model of home visiting program described with support for the matrix	Background information, literature to support the model of the facility home visiting program
Verbiest, S., Bonzon, E., & Handler, A. (2016). Postpartum health and wellness: a call for quality woman-centered care. <i>Maternal Child Health Journal, 20</i> , S1-S7.	Level V	Highlights deficits in the provision of comprehensive care and services during a critical period in women's lives, supports the recommendation that Maternal and Child Health leaders collaborate to create woman-centered postpartum services that are part of a coordinated system of care.	To achieve optimal health care in the postpartum period, it is becoming more apparent that increased flexibility of services, cross-training of providers, a "no wrong door" approach, new insurance and work-place policy strategies, improved communication, and effective coordinated support within a system that values all women and families is required.	Review of literature about postpartum health, use in literature review

<p>Wager, K. A., Lee, F. W., Bradford, W. D., Jones, W., & Kilpatrick, A. O. (2004). Qualitative Evaluation of South Carolina's Postpartum/Infant Home Visit Program. <i>Public Health Nursing, 21</i>(6), 541-546.</p>	<p>Level VI</p>	<p>In South Carolina, the Postpartum/Infant Home Visit (P/IHV) program seeks to provide all Medicaid-eligible mothers and infants with at least one home visit by a nurse or other qualified health professional. Conducted a cost-benefit analysis of the P/IHV program using both qualitative and quantitative methods. Focus groups were held with nurses who provide P/IHV visits to gain insight into the structure and functioning of the P/IHV program, to hear firsthand the nurses' experiences with the program, and to provide guidance in developing the empiric model for measuring cost-benefit.</p>	<p>Nurses indicated that they were knowledgeable about community resources and services available to the families they serve. They connected them with their physician or found them a physician. Referral processes were identified as an important factor in determining whether a mother receives a home visit. Overall, the nurses felt that the home visit program has had a positive impact on the health and well-being of the mothers and infants served.</p>	<p>Overview of a state home visiting program that describes the nurses experience and how they helped families, discussion about connecting with providers, use in literature review to support home visiting programs</p>
<p>Wilcox, A., Levi, E. E., & Garrett, J. M. (2016). Predictors of non-attendance to the postpartum follow-up visit. <i>Maternity Child Health Journal, 20</i>, S22-S27.</p>	<p>Level VI</p>	<p>30% of all women who attended a prenatal visit did not return for a postpartum visit, variable associated with not-attendance included having Medicaid or no insurance (RR 1.4, 95% CI 1.2-1.6), being Hispanic or Latino (RR 1.2, 95% CI 1.1-1.3), having a vaginal delivery (RR 1.2, 95% CI 1.1-1.4), and age < 20 years (RR 0.77, 95% CI 0, 64-0.92).</p>	<p>Risk of postpartum visit non-attendance disproportionately impacts socially and economically vulnerable patients who are younger, part of a minority ethnic background, and depend on state funded health insurance.</p>	<p>Only one facility represented in study, but good information to add to background information on reasons for non-attendance</p>
<p>Witte, R. S. & Witte, J. S. (2015). <i>Statistics</i> (10th Eds.). Hoboken, N. J.: Wiley.</p>	<p>Level VII</p>	<p>Statistics textbook with basic statistics information.</p>	<p>Overview of statistical test with a single population</p>	<p>Provides support for statistical test for the project</p>

<p>World Health Organization (2013). <i>WHO Recommendations on Postnatal Care of the Mother and Newborn</i>. Retrieved from http://apps.who.int/iris/bitstream/10665/97603/1/9789241506649_eng.pdf</p>	<p>Level VII</p>	<p>Overview of the postnatal period that is a critical phase in the lives of mothers and newborn babies. Most maternal and infant deaths occur during this time. Yet, this is the most neglected period for the provision of quality care. The guidelines focus on postnatal care of mothers and newborns in resource-limited settings in low- and middle-income countries.</p>	<p>The guidelines address timing, number and place of postnatal contacts and content of postnatal care for all mothers and babies during the six weeks after birth.</p>	<p>International focus for postnatal care, use in introduction and support of importance of project</p>
<p>Yonemoto, N. , Downswell, T., Nagia, S., & Mori, R. (2015). Schedules for home visits in the early postpartum period (Review). <i>Cochrane Collaboration, 7</i>, 1-92. Retrieved from http://www.cochrane.org/CD009326/PREG_home-visits-in-the-early-period-after-the-birth-of-a-baby</p>	<p>Level I</p>	<p>Included data from 12 randomized trials with data for more than 11,000 women, in multiple countries across the world, some evidence that postnatal care at home may reduce infant health service utilization in the weeks following birth, more home visits may encourage more women to exclusively breast feed and is associated with maternal satisfaction with postnatal care.</p>	<p>Overall findings were inconsistent but may promote infant health and maternal satisfaction, the frequency, timing, duration, and intensity should be based upon local needs. Further RCTs are indicated to formulate the optimal package.</p>	<p>Cochrane review that provides background information and support for home visiting programs as well as need for more studies</p>

Appendix C

Figure 1

PDSA Model for Nurse Home Visiting and Postpartum Care

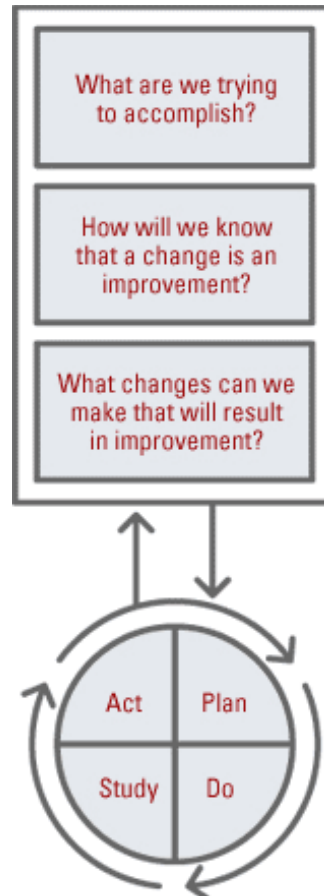
Aim of PDSA quality improvement is to pursue effective changes in the pursuit of favorably outcomes. It can be viewed as probes for knowledge that involve testing interventions by manipulating variables and observing the effect upon other variables. The PDSA model is considered a quasi-experimental strategy and commonly involves a time-series design including control charts that compare control and intervention conditions (USDHRSA, 2011).

PDSA cycles – specific tests of change that satisfies scientific principles

- ▶ **Plan** – Identify what can be improved or what change is needed, define the population, and develop process and method to monitor change

- ▶ **Do** - Implement the change and collect data
- ▶ **Study** - Measure and analyze the process or outcome, what was learned?
- ▶ **Act** - If the results are not as hoped for, what modifications are needed, act on what was learned

Figure 2



Appendix D



Forsyth Medical Center
3333 Silas Creek Parkway
Winston-Salem, NC 27103

June 20, 2017

To Whom It May Concern:

We at Novant Health Forsyth Medical Center have reviewed Ann L. Smith's DNP Project: Nurse Home Visiting Program and Postpartum Care. Ms. Smith has organizational support and approval to conduct her project within our institution. We understand that for Ms. Smith to achieve completion of the DNP program, dissemination of the project will be required by East Carolina University which will include a public presentation related to the project and a manuscript submission will be encouraged.

Our organization has deemed this project a quality improvement initiative and it will not require institutional IRB review.

Thank you,



Vice-President of Women Services, Novant Health Greater Winston-Salem Market
President and COO, Novant Health Medical Park Hospital

Appendix E



Your 6-week Postpartum Visit: It's All About You

Congratulations on your new baby! You will have a checkup in 6 weeks known as your postpartum visit. The purpose of this visit is to check on your health and talk about your new life as a mom. It is important that you stay healthy. This includes your emotional health.

You should keep your postpartum checkup even if you are feeling fine. Your doctor or healthcare provider may want to see you in less than six weeks, especially if you have a cesarean section (C-section).

What to expect at your visit:

Pregnancy problems: You will talk with your doctor about any problems you may have had during your pregnancy, labor and giving birth. You may want to ask your doctor how to avoid any problems if you plan to get pregnant in the future.

Physical exam: You will have a physical exam so that your doctor can see how your body is recovering from giving birth. Your doctor will check your weight, blood pressure and exam your breasts, belly and pelvis. If you have diabetes or high blood pressure, your doctor may check your levels.

Mental Health: You should plan to share with you doctor how you've been feeling since you became a new mom. It is normal to feel tired and stressed with a newborn. But sometimes you may feel very sad or nervous. This could be a condition called postpartum depression. Having postpartum depression can make it very hard to live your life and take care of your baby. Talk with your doctor about what you can do if you feel like you may have postpartum depression.

Birth Control: You will talk with your doctor about your plans for any future pregnancies.

Breastfeeding: You may receive help and support to breastfeed if you need it.

Wellness Care: You and your doctor will discuss your overall health plan, including diet and exercise. You may also have a chance to receive any vaccinations you may need.

Questions: Bring a list of questions you would like to discuss with your doctor. This will help you make the most of your visit together.

Planning for your postpartum visit on: Date _____ Time _____



Su visita de 6 semanas postparto: Es todo acerca de usted.

¡Felicidades por su nuevo bebé! Usted tendrá un chequeo en 6 semanas conocido como su visita postparto. El propósito de esta visita es revisar su salud y hablar de su nueva vida como madre. Es importante que usted se mantenga saludable. Esto incluye su salud emocional.

Usted debe atender a su chequeo postparto incluso si usted se siente bien. Es posible que su médico o profesional de la salud desee verla en menos de seis semanas, especialmente si se le practicó una cesárea.

Que esperar en su visita:

Problemas del embarazo: Usted hablará con su médico sobre cualquier problema que haya tenido durante su embarazo, trabajo de parto y parto. Es posible que desee preguntarle a su médico cómo evitar cualquier problema si planea quedar embarazada en el futuro.

Examen Físico: Usted tendrá un examen físico para que su médico pueda ver cómo su cuerpo se está recuperando después de dar a luz. Su médico revisará su peso, presión arterial y examinará sus senos, vientre y pelvis. Si usted tiene diabetes o presión arterial alta, su médico podría revisar sus niveles.

Salud Mental: Usted debe planear el compartir con su doctor cómo se ha estado sintiendo desde que usted se convirtió en una nueva mamá. Es normal sentirse cansada y estresada con un recién nacido. Pero en ocasiones usted podría sentirse muy triste o nerviosa. Esto podría ser una condición llamada depresión posparto. Tener depresión posparto puede hacerle muy difícil vivir su vida y cuidar de su bebé. Hable con su médico acerca de lo que puede hacer si siente que usted puede tener depresión posparto.

Control de la Natalidad: Usted hablará con su médico acerca de sus planes para futuros embarazos.

Lactancia Materna: Usted puede recibir ayuda y apoyo para amamantar si lo necesita.

Cuidados de Salud: Usted y su médico discutirán su plan general de salud, incluyendo dieta y ejercicio. También tendrá la oportunidad de recibir cualquier vacuna que pueda necesitar.

Preguntas: Traiga una lista de preguntas que le gustaría discutir con su médico. Esto le ayudará a aprovechar su visita al máximo.

Planificación para su visita postparto en: Fecha _____ Hora _____

Appendix F

FORSYTH CONNECTS | **NOVANT HEALTH**

Home Visiting and Six Week Postpartum Visit

Ann L. Smith, MSN, RN, NNP-BC
ECU DNP Student





Purpose

- Our local community Medicaid/self-pay Obstetric clinics reports that only 52% of their patients return for their 6-week postpartum visit
- Project will evaluate the improvement strategies on return rates for the 6-week postpartum visit including the following:
 - patient education
 - scheduling reminders
 - transportation






Project Question

Do planned improvement strategies of providing patient education, scheduling reminders, and transportation by a postnatal nurse home visiting program increase return rates for the 6-week postpartum visit?

Background

- ACOG (2016) recommends that all women undergo a comprehensive postpartum visit within the first 6 weeks after birth
 - Preventative care
 - Ensuring a smooth transition to well women care
 - Full assessment of physical, social, and psychological well-being
 - Receive desired form of contraception during the visit
- Establishing women's reproductive goals and assisting them in choosing a contraceptive method is aimed at increasing birth spacing and preventing unintended pregnancies

Background, cont.

- Recent estimates in the United States showed that 38% of pregnancies have short interpregnancy intervals
- Unintended pregnancy rates remain high even though rates did decline to 45% in 2011 as compared to 51% in 2008, with racial and ethnic minority women experiencing higher rates as compared to whites
- Unfortunately, as many as 40% of women do not attend a postpartum visit






Variables Related to Low Postpartum Return Rates

- Medicaid or no insurance
- Less than 20 years old
- Hispanic or Latina
- Less than a high school education
- Vaginal delivery
- No prenatal care
- No post-partum complications
- No counseling to attend the visit




How Can We Increase the Return Rates?

- Recent systematic review of evidence evaluating interventions in the antenatal and postnatal periods to increase utilization of the postpartum visit, 12 were statistically significant, but no intervention strategy was evaluated more than a few times and many were relatively dated
- Potential positive interventions:
 - Offering incentives
 - Patient education
 - Appointment scheduling strategies and changing timing of visits
 - Home visits
 - Telephone follow up
 - Mail reminders
 - Financial assistance
 - Transportation assistance





Forsyth Connects

FORSYTH CONNECTS | NORTHSHORE HEALTH



Studies have suggested that postnatal nurse home visiting programs:

- provide emotional and educational support for parents after birth
- Improve parenting behaviors
- Connect families with their providers and individualized community resources
- Result in increased preventative care and reduced emergency medical care





Methods

- During the first quarter of 2017, baseline data for 6-week postpartum return rates will be collected by chart review for each woman enrolled in the program that are being cared for at the local community clinics
- No patient identifiers will be collected
- Follow up data will be collected during the first quarter of 2018 to determine post-intervention return rates and compare with baseline data

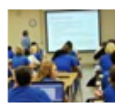

Methods, Cont.

- Descriptive data will be collected to describe the population
 - Age
 - Race
 - Marital status
 - Graevids/pars
 - Insurance (Medicaid or Self-Pay)
 - Provider group
- Descriptive data of the two groups, pre and post implementation of improvement strategies, will also be compared
- Statistical analysis of the data collected will include running a two-tailed, one-sample t-test in SPSS with a significance level of 0.05.





Interventions

- Development of an educational pamphlet about benefits of postpartum visits – approved by Corporate Patient Education Committee
- Education of team in November and December
- Home visiting nurses will give families the pamphlet and discuss benefits of 6-week postpartum visit at first home visit
- Team will determine need for transportation sign up – Lyft Program and complete process if need identified
- Scheduler to call mother 2 days prior to 6-week visit
- Starts January 2018

Educational Pamphlet




Impact


- Using simple strategies such as providing education about the importance of the 6-week postpartum visit, reminder phone calls, and providing transportation by a nurse home visiting program can increase return rates for the 6-week postpartum visit
- Improving return rates can positively impact health prevention, wellness, and contraception use for the postpartum woman
- Leads to prevention of unintended pregnancies and longer intervals between pregnancies
- Improved the health of our community



NI UNIVERSITY HEALTH

Connection to Professional Practice Model and/or The Quality-Caring Model


- Caring relationship between home health nurse and families
- Connect mothers with providers using our values of compassion and diversity
- Strategies involve caring factors :
 - Mutual problem solving
 - Attentiveness/assurance
 - Encouraging manner
 - Appreciation of uniqueness/meaning



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Health Belief Model

- Most widely used models for understanding health behavior
- Theory suggests behavior depends on how much a person values a goal and on their judgement that action will achieve that goal
- When an individual regards themselves as susceptible to a risk condition and believes that the available course of action is beneficial to their illness or health, they are more likely to take actions



- Implementation of health education by the home visiting nurses
 - and severity of illness related to the postpartum period
 - benefits of the 6-week postpartum visit to promote this preventative health behavior
- Removing barriers such as transportation issues
- Enhancing self-efficacy can influence the mother's decision to return for their visit
- Home health nurses are the cue to action to connect the mother with their provider, remind them about the visit, and influence them to return for their postpartum visit.

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Questions?

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Appendix G

6-Week Postpartum Visit (PPV) Project Checklist

6-week PPV education completed and education tool given to mother at home visit.

PPV scheduled on ___/___/___ at _____am / pm.

Patient has transportation available to go to postpartum visit.

If not, transportation was arranged through _____

Reminder Phone call completed 2 days prior to 6-week PPV

- Completed on ___/___/___ at _____am / pm by _____ (initials)

Outcome of Phone Call:

- A. Spoke with mother and reminded her about her PPV
- B. Spoke with family member since mother unavailable and reminded them about her PPV
- C. No answer, left message and sent a text message
- D. No answer and no voicemail, sent text message
- E. Phone number disconnected
- F. Other _____

Other interventions needed _____

Appendix H



Proposal for Improvement Effort

Project Title: Home Visiting and Six-week Postpartum Visit

NH Mission: Novant Health exists to improve the health of communities, one person at a time

What are you trying to accomplish?

This quality improvement project will evaluate the improvement strategies of providing patient education, scheduling reminders, and transportation by a postnatal nurse home visiting program and return rates for the 6-week postpartum visit.

What factors prompted you to start this project? (brief history)

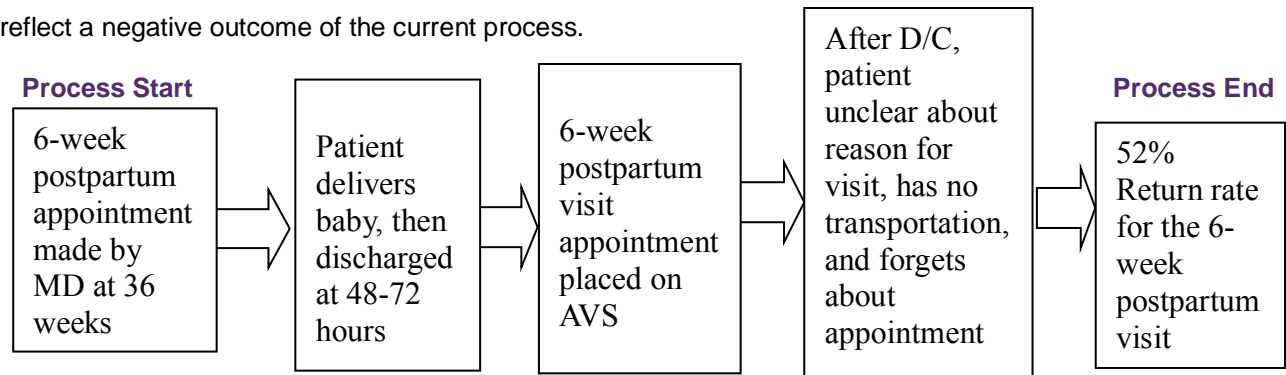
ACOG (2016) recommends that all women undergo a comprehensive postpartum visit within the first 6 weeks after birth for preventative care and ensuring a smooth transition to well woman care. The visit should include a full assessment of physical, social, and psychological well-being, and each woman can receive her desired form of contraception during the visit. Establishing women's reproductive goals and assisting them in choosing a contraceptive method is aimed at increasing birth spacing and preventing unintended pregnancies (Henderson et al., 2016). Recent estimates in the United States showed that 38% of pregnancies have short interpregnancy intervals (USDHHS, 2014). Unintended pregnancy rates remain high even though rates did decline to 45% in 2011 as compared to 51% in 2008, with racial and ethnic minority women experiencing higher rates as compared to whites (Finer & Zolna, 2016; Jackson, Wang, Morse, 2017). Unfortunately, as many as 40% of women do not attend a postpartum visit (ACOG, 2016).

Variables associated with not returning for the 6-week postpartum visit include having Medicaid or no insurance, being less than 20 years old, being Hispanic or Latina, having less than a high school education, having a vaginal delivery, having no prenatal care, having no post-partum complications, and having no counseling to attend the visit (Lu & Prentice, 2002, Nkwabong, Ilue, & Bisong, 2015;

Wilcox, Levi, & Garrett, 2016). In a recent review of evidence evaluating interventions in the antenatal and postnatal periods to increase utilization of the postpartum visit, 12 were statistically significant, but no intervention strategy was evaluated more than a few times, and many were relatively dated (Stumbras, Rankin, Caskey, & Haider, 2016). They discussed potential positive interventions in the postpartum period including offering incentives, patient education, appointment scheduling strategies, and changing timing of visits. Implementing other specific interventions including postpartum hospital and home visits, telephone follow up, mail reminders, extended comprehensive education and resource availability, financial assistance and transportation assistance all increased return rates for postpartum visits (Bryant, Haas, McElrath, & McCormick, 2006; Buckley, 1990; Ghilarducci & McCool, 1993; IHPI, 2003; Kabakian-Kasholian & Campbell, 2007).

In our community, the local Medicaid/self-pay Obstetric clinics reports that only 52% of their patients return for their 6-week postpartum visit. Our facility recently received grant funding for a new postpartum, short-term nurse home visiting program, called Forsyth Connects, for all families who delivered at our facility and who reside in Forsyth County. The home visiting nurse provides a comprehensive, integrated home visit at 2-3 weeks postpartum for those families who agree to participate in the program. Studies have suggested that postnatal nurse home visiting programs provide emotional and educational support for parents after birth, improve parenting behaviors, and connect families with their providers and individualized community resources, resulting in increased preventative care and reduced emergency medical care (Dodge, Goodman, Murphy, O'Donnell, & Sato, 2013; Kendrick et al., 2000; Kronberg, Vaeth, & Kristensen, 2012; Yonemoto, Dowswell, Nagai, & Mori, 2015).

Project Boundaries/Block Diagram: Using the block diagram below, please describe the CURRENT process steps or system components that need to be improved. Your Process End block will reflect a negative outcome of the current process.



Team Members: Please list the People or Titles/Role of team members.

Team Leader: Ann L. Smith, MSN, RN, NNP-BC, Director of Women’s and Children’s Health, ECU DNP Student

Facilitator: Nurse Manager Forsyth Connects

Team members/ Dept.’s: 9 Forsyth Connects Team members

How will we know if a change is an improvement?

Measures: List known measures with brief operational definitions. Include any goals or target

During the first quarter of 2017, baseline data for 6-week postpartum return rates will be collected by chart review for each woman enrolled in the program that are being cared for at the local community clinics. No patient identifiers will be collected. Follow up data will be collected during the first quarter of 2018 to determine post-intervention return rates and compare with baseline data.

Descriptive data will be collected to describe the population including the age, race, marital status, gravida/para, insurance, and provider group for mothers enrolled in the postnatal home visiting program. Descriptive data of the two groups, pre-and post-implementation of improvement strategies, will also be compared.

Statistical analysis of the data collected will include running a two-tailed, one-sample t-test in SPSS with a significance level of 0.05. A one-sample t-test was chosen due to knowing the mean rate for 6-week postpartum visit before the intervention to allow comparison of a known mean to a new mean

after implementation of improvement strategies. The use of t assumes that the underlying population is normally distributed and is distributed with $n - 1$ degrees of freedom (Witte & Witte, 2015).

What interventions are you considering that may affect a change?

1. Development of an educational pamphlet about benefits of the postpartum visits using resources from the March of Dimes, ARHP, and ACOG (ACOG, 2016; March of Dimes, 2014; ARHP, 2008). The pamphlet, “Your Six Week Postpartum Visit: It’s All About You” describes the importance of the 6-week visit and lists what to expect at the visit including the following categories: pregnancy problem, physical exam, mental health, birth control, breastfeeding, wellness care, and questions (see attached). This pamphlet was approved through the Corporate Education Committee.
2. Education for the Forsyth Connect team about the use of the pamphlet to be given to all patients on their first home visit.
3. Home visiting nurses will give the pamphlet and discuss the benefits of the 6-week postpartum visit with the mother at the first home visit.
4. Home visiting nurses will evaluate need for transportation to the 6-week visit and sign up the mother for the Lyft Program or other transportation system.
5. Forsyth Connect Central scheduling specialists will call the patient two days prior to their scheduled 6-week postpartum visit to remind them about the visit.
6. New strategies will be implemented in January 2018

How will this project impact your department? Identify how potential changes you are going to test or implement may impact staff and processes in your area.

Using simple strategies such as providing education about the importance of the 6-week postpartum visit, reminder phone calls, and providing transportation by a nurse home visiting program can increase return rates for the 6-week postpartum visit. Improving return rates can positively impact health prevention, wellness, and contraception use for the postpartum woman, potentially leading to prevention of unintended pregnancies and improving the health of our community.

How does the Novant Nursing Professional Practice Model and/ or The Quality-Caring Model inform your study?



The caring relationship between the Forsyth Connect Home Health Nurses and our postpartum mothers is essential for us to provide a remarkable nursing experience and connect the mothers with their OB providers. The

Home Visiting nurses will use the caring factors of mutual problem solving, attentive reassurance, encouraging manner, and appreciation of unique meaning as they provide compassionate care for our enrolled families and implement the improvement strategies to increase return rates for the 6-week postpartum visit.

The Health Belief Model (HBM) is also fundamental to this project and is one of the most widely used models for understanding health behavior. The theory suggests behavior depends on how much a person values a goal and, on their judgement, that action will achieve that goal. When an individual regard themselves as susceptible to a risk condition and believes that the available course of action is beneficial to their illness or health, they are more likely to take actions (Glanz, Burke, & Rimer, 2015). Components of the HBM will be used in the implementation of health education by the home visiting nurses including the susceptibility and severity of illness related to the postpartum period and the many benefits of the 6-week postpartum visit to promote this preventative health behavior. Removing barriers such as transportation issues and enhancing self-efficacy can also influence the mother's decision to return for their visit. The home health nurses can also be the cue to action to connect the mother with their provider, remind them about the visit, and influence them to return for their postpartum visit.

What other departments need to know about this effort? Who needs to be informed of progress and planned changes because of future resource requests or impact on their department?

Forsyth Connects Home Health Team

Community OB Clinics

Appendix I



Forsyth Medical Center
3333 Silas Creek Parkway
Winston-Salem, NC 27103

DATE: October 13, 2017
TO: Ann Smith, MSN, NNP-BC, Nursing and Patient Care
FROM: Kevin Johnson, PhD, Manager, Forsyth Mem Hosp, Inc. IRB
PROTOCOL TITLE: Nurse Home Visiting Program
PROTOCOL NUMBER: 17-857
APPROVAL PERIOD: Approval Date: October 13, 2017 Expiration Date: October 12, 2018

The Forsyth Mem Hosp, Inc. IRB, operated by Novant Health, has reviewed the protocol entitled: Nurse Home Visiting Program. The review of your submission included the items listed below.

Attachments

- Proposal for Improvement Effort – Home Visiting and Six-week Postpartum Visit
Educational Pamphlet – "Your 6-week Postpartum Visit: It's All About You"
Waiver of Informed Consent
Waiver of HIPAA Authorization for Research

The project has been approved for the procedures and subjects described in the protocol. This protocol must be reviewed for renewal on a yearly basis for as long as the research remains active. Should the protocol not be renewed before expiration, all activities must cease.

This finding will be documented in the minutes of the November 02, 2017 IRB meeting. A copy of the protocol is maintained by the IRB office. All minutes and proceedings pertinent to this protocol are maintained by the IRB office. The Novant Health IRBs are registered with the Office for Human Research Protections (OHRP) and are in compliance with the requirements of federal regulations 45 CFR 46, 21 CFR 50, 21 CFR 56 and internal policies as revised to date. If you have any questions or need additional information, please contact the IRB office at (336)718-9670 or irb@novanthealth.org.

Sincerely,



Forsyth Mem Hosp, Inc. IRB Chair

Notes:

The study-specific rationale provided by the investigator is sufficient to justify the waiver of informed consent for research [45 CFR 46.116(d)] and waiver of HIPAA authorization [45 CFR 164.512(i)(2)(ii)].

Expedited Review - Category 5, 7

Appendix J

Institutional Review Board (IRB) Authorization Agreement

Name of Institution or Organization Providing IRB Review (Institution/Organization A):
Forsyth Memorial Hospital: Inc., IRB

IRB Registration #: 00002644 Federalwide Assurance (FWA) #, if any: 00018652

Name of Institution Relying on the Designated IRB (Institution B):

East Carolina University

PWA Y: 00000658

The Officials signing below agree that East Carolina University may rely on the designated IRB for review and continuing oversight of its human subjects research described below: (check one)

C) This agreement applies to all human subjects research covered by Institution B's FWA.

(X) This agreement is limited to the following specific protocol(s):

Name of Research Project: Nurse Home Visiting Program

Name of Principal Investigator (institution A): Ann Smith (Novant Health employee) Name of Investigator (institution B): Ann Smith (ECU DNP Student) Sponsor or Funding Agency: N/A Award Number, if any

Other (describe):

The review performed by the designated IRB will meet the human subject protection requirements of Institution B's OHRP-approved FWA. The IRB at Institution/Organization A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the Terms of its OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

Signature of Signatory Official (Institution/Organization A):

 Date: 19 Oct 2017

Print Full Name: _____

Institutional Title: Sr Vice - President Medical Affairs
Novant Health

Signature of Signatory Official (Institution B):

 Date: 10/19/2017

Print Full Name: Michael R. Van Scott, Ph.D. Institutional Title: Senior Associate Vice Chancellor for Research and Institutional Official

Appendix K

Month /Quarter ____/____									
NURSE HOME VISITING AND 6-WEEK POSTPARTUM - DATA COLLECTION TOOL									
Year	Age	Race	Ethnicity	G/P	Marital Status	OB Provider	Payor	6-week PP Visit	Comments
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	
					Single		Medicaid	Yes	
					Married		Self	no	

Appendix L

Pre- and Post-Implementation Data

Year	Age	Race	Ethnicity	Parity	Marital Status	OB Provider	Payor	Attended 6-week Visit	Phone Call Results	Transportation
2017	38	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	25	AA	Non-Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Nonattendance		
2017	35	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	29	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	40	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	40	Other	Hispanic	Nulliparous	Married	Com Clinic A	Self-Pay	Nonattendance		
2017	28	Asian	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	42	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	29	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	21	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	37	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	17	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	26	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	26	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	34	Caucasian	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	26	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		

2017	20	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	23	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	29	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	35	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	28	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	30	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	22	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	22	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	20	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	22	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	26	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	23	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	29	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	22	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	24	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	19	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	23	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Self-Pay	Attended		
2017	22	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	37	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	23	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	23	Asian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	33	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	23	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		

2017	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	24	Other	Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended		
2017	28	AA	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	24	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	24	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	26	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	32	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	26	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	23	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	23	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	29	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	23	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	29	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	33	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	46	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	35	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	26	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	34	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	34	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	29	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	28	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	36	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	28	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	24	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	25	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended		

2017	27	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	33	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	29	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	34	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	27	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	38	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	18	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Nonattendance		
2017	20	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	21	Other	Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Nonattendance		
2017	37	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	32	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	26	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	16	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	35	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	21	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	32	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	21	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	27	Other	Hispanic	Multiparous	Married	Com Clinic A	Self-Pay	Attended		
2017	35	Other	Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Attended		
2017	36	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	19	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	31	Asian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		

2017	30	AA	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	35	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	22	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	23	AA	Non-Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Nonattendance		
2017	22	Other	Hispanic	Nulliparous	Married	Com Clinic B	Self-Pay	Nonattendance		
2017	23	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	20	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	33	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Nonattendance		
2017	24	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	19	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	40	Caucasian	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	36	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	37	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	25	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	29	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	35	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	25	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	31	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	23	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	20	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	35	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		

2017	32	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	24	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended		
2017	32	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	26	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	18	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	33	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	25	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	23	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	20	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended		
2017	25	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	35	Other	Hispanic	Nulliparous	Married	Com Clinic A	Self-Pay	Nonattendance		
2017	34	AA	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	34	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	30	Caucasian	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	32	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended		
2017	17	Other	Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Nonattendance		
2017	31	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	34	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	18	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	31	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	20	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	33	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		

2017	20	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	24	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	42	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	25	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	40	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	24	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	33	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	36	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	38	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	27	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	27	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	20	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	36	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	34	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		
2017	24	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	16	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	22	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	35	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended		
2017	16	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	25	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended		
2017	38	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Nonattendance		
2017	24	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	32	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	38	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended		

2017	23	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance		
2017	27	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	24	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	24	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	40	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	21	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2017	37	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance		
2017	25	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended		
2018	32	Other	Hispanic	Nulliparous	Married	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	19	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	17	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Call	yes
2018	28	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Call	yes
2018	26	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	37	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	22	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Text Message	yes
2018	20	Other	Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended	No Answer, Text Message	yes
2018	26	AA	Non-Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	27	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes

2018	35	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	40	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke with Family	yes
2018	19	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	Arranged
2018	32	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	34	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	18	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	16	Other	Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Attended	No Answer, Text Message	yes
2018	30	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	20	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	36	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	21	Other	Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Attended	Spoke	yes
2018	28	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	30	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	28	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	35	Other	Hispanic	Multiparous	Married	Com Clinic A	Self-Pay	Attended	Spoke	yes
2018	21	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	16	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes

2018	25	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	23	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	16	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	Arranged
2018	43	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	20	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	23	AA	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance	Spoke with Family	yes
2018	27	Caucasian	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke with Family	yes
2018	35	Other	Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	33	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance	Spoke with Family	yes
2018	43	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	30	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	24	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	19	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes

2018	30	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Call	yes
2018	30	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	27	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	16	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	37	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	31	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	24	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	36	Caucasian	Non-Hispanic	Nulliparous	Married	Com Clinic A	Self-Pay	Attended	Spoke	yes
2018	36	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	36	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	36	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	20	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	35	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	33	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes

2018	33	AA	Non-Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	17	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	33	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	38	Other	Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Attended	No Answer, Left Message	yes
2018	28	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	19	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	25	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	41	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	36	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Call	yes
2018	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	27	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	19	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	23	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke with Family	yes
2018	37	Other	Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Attended	Spoke	yes
2018	24	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes

2018	38	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Nonattendance	Spoke with Family	yes
2018	27	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	26	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	22	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	Arranged
2018	19	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	34	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	24	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended	Spoke	yes
2018	18	Other	Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Attended	Spoke	yes
2018	23	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	26	AA	Non-Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	28	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	18	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	24	AA	Non-Hispanic	Nulliparous	Single	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes

2018	25	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	32	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	26	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	Arranged
2018	27	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Attended	Spoke	Arranged
2018	29	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	23	AA	Non- Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	30	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	29	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	21	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	29	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	22	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	32	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	33	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	27	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	22	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	30	AA	Non- Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	40	Other	Hispanic	Multiparous	Single	Com Clinic A	Self-Pay	Nonattendance	Spoke	yes

2018	26	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	21	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	23	AA	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	29	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Call	yes
2018	24	AA	Non-Hispanic	Multiparous	Single	Com Clinic B	Medicaid	Nonattendance	No Answer, Left Message	yes
2018	37	Caucasian	Non-Hispanic	Multiparous	Married	Com Clinic B	Medicaid	Attended	No Answer, Left Message	yes
2018	23	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	25	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	37	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes
2018	18	Caucasian	Non-Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Nonattendance	No Answer, Text Message	yes
2018	30	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	20	AA	Non-Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	31	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	30	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	36	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Text Message	yes

2018	26	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	No Answer, Left Message	yes
2018	33	AA	Non- Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Nonattendance	No Call	yes
2018	17	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	22	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	32	Other	Hispanic	Nulliparous	Married	Com Clinic A	Medicaid	Nonattendance	Spoke	yes
2018	23	Other	Hispanic	Multiparous	Married	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	18	Other	Hispanic	Nulliparous	Single	Com Clinic A	Medicaid	Attended	Spoke	Arranged
2018	42	Other	Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes
2018	22	AA	Non- Hispanic	Multiparous	Single	Com Clinic A	Medicaid	Attended	Spoke	yes

Appendix M

Table 1

Pre and Post Implementation Sample Demographics

Characteristic	Pre-Implementation (n = 172)	Post-Implementation (n = 131)	<i>p</i>
Age	Mean = 27.8 years SD = 6.4 years	Mean = 27.5 years SD = 6.6 years	
Race			.282
Caucasian	24 (14.0%)	13 (9.9%)	
African American	51 (29.7%)	38 (29.0%)	
Asian	3 (1.7%)	0 (0.0%)	
Other	94 (54.7%)	80 (61.1%)	
Ethnicity			.388
Non-Hispanic	77 (44.8%)	51 (38.9%)	
Hispanic	94 (54.7%)	80 (61.1%)	
Marital Status			.660
Single	121 (70.3%)	99 (75.6%)	
Married	51 (29.7%)	32 (24.4%)	
Parity			.438
Nulliparous	58 (33.7%)	48 (36.6%)	
Multiparous	114 (66.3%)	83 (63.4%)	
Payor			.828
Medicaid	165 (95.9%)	125 (95.4%)	
Self-pay	7 (4.1%)	6 (4.6%)	
OB Group			.660
Community Clinic A	155 (90.1%)	116 (88.5%)	
Community Clinic B	17 (9.9%)	15 (11.5%)	

Appendix N

Table 2

AANC Doctor of Nursing Practice Essentials

DNP Essential	Description	Demonstration of Knowledge
Essential I <i>Scientific Underpinning for Practice</i>	<p>Competency – Analyzes and uses information to develop practice</p> <p>Competency – Integrates knowledge from humanities and science into context of nursing</p> <p>Competency -Translates research to improve practice</p> <p>Competency – Integrates research, theory, and practice to develop new approaches toward improved practice and outcomes</p>	<ul style="list-style-type: none"> • Reviewed and analyzed information regarding 6-week postpartum visits and nurse home visiting programs • Translated information about nurse home visiting programs to improve return rates for the 6-week visit • Integrated the health belief model when developing strategies to change behaviors for mothers • Integrated interventions into nurse home visiting program processes, improving practice and outcomes for postpartum mothers
Essential II Organizational & Systems Leadership for Quality Improvement & Systems Thinking	<p>Competency – Develops and evaluates practice based on science and integrates policy and humanities</p> <p>Competency – Assumes and ensures accountability for quality care and patient safety</p> <p>Competency – Demonstrates critical and reflective thinking</p> <p>Competency – Advocates for improved quality, access, and cost of health care; monitors costs and budgets</p> <p>Competency – Develops and implements innovations incorporating principles of change</p> <p>Competency – Develops and implements innovations incorporating principles of change</p> <p>Competency – Effectively communicates practice</p>	<ul style="list-style-type: none"> • Utilized literature and professional organizations including March of Dimes, ARHP, and ACOG to develop teaching tool and strategies to improve return rates for the 6-week postpartum visit • Utilized PDSA cycle when implementing improvement strategies along with critical and reflective thinking as moved through process • Accountable for grant budget for nurse home visiting program with no direct impact from new strategies • Educated and led Nurse Home Visiting team to implement new strategies with goal of improving return rates for the 6-week postpartum visit • Utilized the principles of change when implementing new strategies including team education, team

	<p>knowledge in writing and orally to improve quality</p>	<p>support, creation of a checklist, and team feedback and evaluation</p> <ul style="list-style-type: none"> Utilized effective communication during weekly team meetings, education sessions, leader meetings, and community board meetings during planning, implementation, and evaluation phases of project
<p>Essential III Clinical Scholarship & Analytical Methods for Evidence-Based Practice</p>	<p>Competency – Critically analyzes literature to determine best practices Competency – Implement evaluation processes to measure process and patient outcomes Competency – Designs and implements quality improvement strategies to promote safety, efficiency, and equitable quality care for patients Competency – Applies knowledge to develop practice guidelines Competency – Uses informatics to identify, analyze, and predict best practice and patient outcomes Competency – Collaborate in research and disseminate findings</p>	<ul style="list-style-type: none"> Critically analyzed information regarding 6-week postpartum visits and nurse home visiting programs, identifying best practices Collaborated with community and facility sponsors and partners in the design and implementation of the quality improvement project Created data collection tool, then utilized tool during data collection when reviewing the electronic medical record Created educational tool based on evidence and knowledge gained during project as well as a checklist to ensure all steps were completed by team members to improve 6-week postpartum return rates Utilized Excel to enter data and create graphs, then SPSS to analyze project data Disseminated results to leaders and nurse home visiting team, nursing research council, and ECU students and faculty with a plan to present poster at a national conference and pursue publication.
<p>Essential IV Information Systems – Technology & Patient Care Technology for the Improvement & Transformation of Health Care</p>	<p>Competency - Design/select and utilize software to analyze practice and consumer information systems that can improve the delivery & quality of care</p>	<ul style="list-style-type: none"> Utilized Excel to enter data and create graphs Utilized SPSS to analyze project data and created graphs

<p>Essential V Health Care Policy of Advocacy in Health Care</p>	<p>Competency – Analyzes health policy from the perspective of patients, nursing and other stakeholders Competency – Provides leadership in developing and implementing health policy Competency – Educates stakeholders regarding policy Competency – Advocates for nursing within the policy arena Competency – Advocates for equitable and ethical health care</p>	<ul style="list-style-type: none"> • Reviewed and analyzed the literature to create educational tool considering health literacy principles to educate patients regarding benefits for the 6-week postpartum • Educated facility leaders and nurse home visiting team on strategies to improve return rates for 6-week postpartum visit • Advocated for benefits of a nurse home visiting program to ensure continued funding • Led initiative to enhance equitable and ethical care for postpartum women in community to improve outcomes for both the mother and infant
<p>Essential VI Interprofessional Collaboration for Improving Patient & Population Health Outcomes</p>	<p>Competency – Uses effective collaboration and communication to develop and implement practice, policy, standards of care, and scholarship Competency – Provide leadership to interprofessional care teams Competency – Consult intraprofessionally and interprofessionally to develop systems of care in complex settings</p>	<ul style="list-style-type: none"> • Collaborated effectively with all members of the home visiting team as well as site champions to successfully implement strategies to improve return rates for the 6-week postpartum visit • Collaborated with community clinics and providers to ensure proper utilization of transportation processes and services • Communicated and gained support for project with facility leaders, research council, IRB board, and community advisory board • Consulted effectively with facility nurse scientist and data experts in planning, implementing, and completing project with positive outcomes
<p>Essential VII Clinical Prevention & Population Health for Improving the Nation’s Health</p>	<p>Competency – Integrates epidemiology, biostatistics, and data to facilitate individual and population health care delivery Competency – Synthesizes information & cultural competency to develop & use health promotion/disease</p>	<ul style="list-style-type: none"> • Integrated data from community and literature to identify a population need and potentially successful interventions that addressed a significant health care gap • Developed teaching tool with a focus on health promotion and prevention for the population of

	<p>prevention strategies to address gaps in care Competency – Evaluates and implements change strategies of models of health care delivery to improve quality and address diversity</p>	<p>postpartum mothers in the community to improve the overall health of the nation</p> <ul style="list-style-type: none"> • Implemented strategies that addressed a gap in the community of poor return rates for the 6-week postpartum visit • Evaluated strategies by a home visiting program to improve outcomes for a diverse population of postpartum mothers
<p>Essential VIII</p>	<p>Competency- Melds diversity & cultural sensitivity to conduct systematic assessment of health parameters in varied settings Competency – Design, implement & evaluate nursing interventions to promote quality Competency –Demonstrate advanced clinical judgment and systematic thoughts to improve patient outcomes Competency – Mentor and support fellow nurses Competency- Provide support for individuals and systems experiencing change and transitions Competency – Use systems analysis to evaluate practice efficiency, care delivery, fiscal responsibility, ethical responsibility, and quality outcomes measures</p>	<ul style="list-style-type: none"> • Utilized bilingual nursing staff and created teaching tool in both English and Spanish to meet diversity and cultural needs of population • Designed, implemented, and evaluated strategies by home visiting nurses to improve outcomes for postpartum mothers by increasing return rates for the 6-week postpartum visit • Demonstrated strong knowledge base, advanced clinical judgement, and clinical expertise when educating and supporting home visiting team during project implementation to facilitate process changes • Utilized PDSA model throughout process to achieve positive outcomes • Collected and analyzed data with use of a data collection tool and Excel/SPSS programs to evaluate outcomes of this quality improvement project

Appendix O

Table 3

Timeline for Doctor of Nursing Project

Date	Task	Complete/ Incomplete
May 2017	Explore project topics and ideas	Complete
May 2017 to June 2018	Review the literature for topics	Complete
May 2017	Define project topic	Complete
June 2017	Define theoretical framework to guide project	Complete
June 2017	Establish project committee	Complete
June 2017	DNP Project proposal approval	Complete
June 2017	Submit first draft of final paper - Chapter 1, 2, and 3	Complete
July 2017	Complete project implementation plan – data tool and educational pamphlet	Complete
July 2017	Secure project leader and team member signatures and submit approval form	Complete
July 2017	Final paper approval by faculty lead and 2 nd team member	Complete
August 2017	Begin IRB approval application	Complete
August 2017	Finalize project design and interventions to implement	Complete
September 2017	Submit IRB application	Complete
October 2017	Obtain IRB approval from facility and ECU	Complete
November and December 2017	Education of Home Visiting Nurses	Complete
November 2017	Completion of synthesis of the literature and literature matrix	Complete

November 2017	Final submission of DNP paper – Chapter 1, 2, & 3	Complete
January 2018	Implementation of interventions by Home Visiting Nurses	Complete
January - June 2018	Weekly Meetings with Home Visiting Nurse team and manager	Complete
February - March 2018	Data Collection by chart review from first quarter of 2017	Complete
March - May 2018	Data collection by chart review from the first quarter of 2018	Complete
June 2018	Create Poster of DNP Project	Complete
June 2018	Submit dissemination plan	Complete
June 2018	Submit draft of DNP Project paper	Complete
July 2018	Present DNP Project Outcomes at facility	Complete
July 2018	Present DNP Project Poster at ECU	Complete
July 2018	Final Submission of DNP Paper	Complete
July 2018	Close Out IRB	Complete
July 2018	Upload final paper in ScholarShip repository	Complete
September 2018	Submit manuscript for publication	Incomplete
