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Reduce Postpartum Complications by Improving Postpartum Care Appointment Attendance

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Walden University
2019

Abstract

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MSN, Walden University, 2012

Project Submitted in Partial Fulfillment

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Abstract

This evidence-based project (EBP) was developed to increase postpartum appointment attendance to improve maternal outcomes for postpartum women. The practice problem was that the postpartum women who received prenatal care failed to return for postpartum care at a community clinic in north east Texas. The practice-focused question explored whether an educational intervention with the nursing staff would increase postpartum appointment attendance. The framework used was Pender's Health Promotion Model. The preintervention data were retrieved from an electronic medical record (EMR) generated report that provided the number of postpartum appointments attended 30 days before the intervention. The nursing staff received a one hour two hour live interactive in person training about how to educate the patients on the Association of Women's Health, Obstetrical, and Neonatal Nurses POSTBIRTH warning signs document. The training was developed so that the nurses would provide standardized postpartum education to their patients. They also received training on how to schedule a postpartum appointment in the EMR system and use the patient identifiers in the EMR system to identify the postpartum women. Postintervention reports showed that the patient postpartum appointment attendance increased by 15.92% in a 30-day period. The implications of this project for social change include educating the nurses who work in the postpartum setting to improve their knowledge about the importance of postpartum care. By improving the knowledge level of the nurses, the patients will receive education that will allow them to become more educated, and more engaged in their health care which improves the population's health and reduces the maternal mortality rate.

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Dedication

I want to dedicate the Postpartum project to the Almighty God. My relationship with God has allowed me to persevere through this journey. The scripture that has helped me along this journey is that I can do all things through Christ that strengthens me. I also dedicate the project to my entire family. I have been blessed with a family that has taught me the importance of family values, love, strength, and, most importantly, how to pray. Our grandparents, who are now in heaven, have built our family's foundation on love, power, and endurance. The project is a direct result of that endurance. Without each one of them, I would not be the woman who I am today. I am so grateful to have such a beautiful, loving family. My family encouraged me to reach my goals and pushed me when I wanted to give up! I would also like to dedicate the project to My husband and children who have supported and loved me throughout this journey. Finally, I would like to dedicate the project to my mother Darla Malone. My mother believed in me and has pushed me even when met with resistance. God has blessed me with such a strong, loving mother who has taught me never to give up and never to stop dreaming. The project is more than a dream come true, and for this, I am forever grateful!

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Section 1: Nature of the Project

Introduction

Maternal mortality is the sixth most common cause of death in the United States for women ages 25 to 34 years (Carroll, 2017). From 2000 to 2014, the United States has seen an increase of 25% for maternal mortality. In the state of Texas, there has been a significant increase in maternal mortality with the numbers doubling from 2011 to 2014 (Carroll, 2017). The female body undergoes several physiological changes to support and nurture a pregnancy. The process of involution is the body returning to its prepregnancy state. During the process of involution, the female body is susceptible to postpartum complications (Cassian de Oliveria, 2019). The postpartum patient should seek follow-up medical care to ensure that the woman is not having any postpartum complications. Some of the postpartum complications include, but are not limited to, postpartum hemorrhage, infection, sepsis, postpartum cardiomyopathy, mastitis, breast engorgement, and postpartum depression. Early detection of potential risks associated with postpartum hemorrhage and other postpartum complications will allow for early treatment of the serious condition (Cassian de Oliveria, 2019). The target outcome for this process improvement project is to improve postpartum appointment attendance by scheduling the postpartum appointments before discharge. The nursing staff has been inconsistent with providing education related to postpartum complications because the nurses themselves lack the knowledge to provide proper education (Bingham, et al., 2017). In section 1, I will discuss the problem statement, purpose, the significance, and the nature of the

project. Also, in section 1 I address how the project has affected the community by improving postpartum care appointment attendance and reducing overall maternal mortality.

Problem Statement

The local women's community health clinic serves patients who have a lower socioeconomic status and is in the northeast region of Texas. Most of the patients are on Medicaid, hospital network insurance, or self-pay, except for the employees in the network. The population that is served has a knowledge deficit regarding community resources and the importance of postpartum health care. The problem is that only 42% of women who receive prenatal care return to the clinic for postpartum care (women's health director, personal communication, March 1, 2019). According to the women's health director, there is currently a 35% postpartum complication rate after hospital discharge, with one-half of the complications involving postpartum infection and bleeding (women's health director, personal communication, March 1, 2019). Prior to the implementation of the project, the nursing team did not provide consistent, standardized education for pregnant and postpartum women, and they did not schedule appointments for the women to return to the clinic for postpartum care. There are four nurses, of which two are licensed vocational nurses (LVN), and two are registered nurses (RN) who work in the clinic. All nurses provided some type of postpartum education, but the education that is provided, is not consistent. Ideally, the women who receive prenatal care in the women's clinic will deliver their babies in the hospital of the same network and return to

the women's center to receive postpartum care.

Not only has the nursing team been inconsistent with providing postpartum education, but there also is not a current process in place to address postpartum complications promptly. It is ideal for the nurses to provide the patient with a consistent message to ensure that the patient understands the importance of returning for postpartum care (Bingham, et al., 2017). According to the appointment data collected by the nurse manager, 45% of the patients do not call to schedule their appointments, and 13% do not attend their scheduled appointments (women's health director, personal communication, March 2019). When patients fail to return to the clinic, they do not receive follow-up assessments necessary to prevent potential postpartum complications. If the woman had a postpartum appointment scheduled before her discharge, and she was reminded of the appointment 24 to 72 hours to the appointment, she would be much more likely to return to the women's health clinic. In the recent study performed by Crutchfield, there was an assessment of behaviors surrounded by appointment attendance. The study revealed that 26% of patients stated that they missed their appointment due to forgetfulness (Crutchfield, 2017). My goal in this study is to provide the necessary resources to ensure that the women return to the clinic to receive postpartum care, and to ultimately reduce the maternal mortality and morbidity associated with postpartum complications.

Purpose

According to AWOHNN (2018) in the United States, more than half of all maternal deaths occur during the postpartum period (2018). Some of the deaths could be

avoided with early detection and treatment of postpartum complications. AWOHNN has created an initiative to reduce the incidence of postpartum maternal deaths using the acronym POSTBIRTH (Table 1). A patient encountering any of the identified complications in Table 1 should contact a provider immediately to ensure that there are early assessment and treatment (Bingham, et al., 2016).

Table 1

AWOHNN POSTBIRTH *Complications Warning signs*

Signs	Symptoms
Seizures	Chest pain
Red or swollen leg that is painful or warm to the touch.	Obstructed breathing
Incision that is not healing.	Shortness of breath
Bleeding that is soaking through one pad.	Headache
	Thoughts of harming self or baby.
	Temperature of 100.4°F or higher

Note. Suplee, P., Kleppel, L., Bingham, D. (2016).

According to the American College of Obstetrics and Gynecology (ACOG, 2018), 70% of women report challenges within the first year postpartum, such as breastfeeding issues, sexual dysfunction, urinary incontinence, and postpartum depression. ACOG recommends that a postpartum visit occurs within the first 3 weeks after giving birth, and

no later than 12 postpartum (Bingham, et al., 2017). The postpartum visit should serve as a visit transitioning care from pregnancy back to prepregnancy women's health care.

Gap in Practice

The current gap in practice is that the nursing team has not been consistent with providing postpartum education, and there was not a process in place to address the postpartum complication promptly. Previously, the women were responsible for scheduling their own postpartum appointment. Ideally, the women who receive prenatal care in the women's clinic will deliver their babies in the hospital of the same network and return to the women's center to receive postpartum care. Prior to the project implementation, the nursing team did not provide standardized education for pregnant women, and they did not schedule appointments for the women to return to the clinic for postpartum care. The population that is served had a knowledge deficit regarding community resources and the importance of postpartum health care. Improving postpartum appointment attendance in the woman's health setting is feasible since the population that is being served had a knowledge deficit regarding community resources and the importance of postpartum health care.

The Project Question

The project question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from hospital increase the number of postpartum appointments attended in a 30-day period? In this DNP project, I created a workflow that improved the process of scheduling postpartum appointments, improved

postpartum appointment attendance, and decreased overall hospital readmissions for postpartum complications.

Nature of the Doctoral Project

My approach for this evidence-based project was using a quantitative methodology with a before-after design which allowed for evaluation of data preimplementation and postimplementation. Quantitative methodology is preferred when reviewing objective information that is being described, and numerical data are being reported (Kleinpel, 2013). The before and after approach helped me to determine whether the patients who received their postpartum appointment before discharge had a higher rate of attended appointments than the patients who did not receive the intervention of the standardized postpartum education and appointment at discharge. The quantitative methodology allowed me to analyze the observed intervention on a problem and use the process to test the prespecified phenomena (Kleinpel, 2013). Data collection consisted of obtaining deidentified aggregated data from the electronic medical record (EMR). The clinic manager retrieved the data from the EMR to produce a weekly report consisting of the number of postpartum appointments that were attended, how many women contacted the clinic for postpartum complications, and how many hospital readmissions occurred as a result of postpartum complications. I used the information collected to determine how many women returned to the women's clinic for postpartum care and then I compared it with the data collected before the implementation of the new postpartum process. I compared the number of hospital readmissions after the educational intervention to the retrospective data of hospital readmissions before the educational intervention. The readmissions were separated by the complication, and I tracked the follow-up care to

determine if an admission could have been prevented. I shared the collected data with the team in the weekly team and leadership meetings. Also, I shared the data with the executive leaders as a goal that is being tracked on a monthly basis. The manager collected the aggregated to track progress and make improvement**s** in health care of women receiving postpartum care.

Significance

The increase in postpartum care appointment attendance affects several stakeholders. Those stakeholders include the health care providers, patients, families, and the hospital staff. The patients who have postpartum complications can receive early treatment and reduce the need for hospitalization. With the reduction of postpartum complications, the patients will less likely suffer lost wages for being delayed from returning to work. Also, there will less likely be an incidence of caregiver role strain, especially if the woman has other children to care for in the home. Women who suffered from postpartum complications were less likely able to provide self-care or baby care in the postpartum phase (Ozdemir, et al.,2018). Postpartum care is essential for early assessments of anemia, blood loss, breast care, infection, and tetanus immunization. The patients need to be educated about the danger signs of postpartum complications, as well as family planning (Mahmood, et al., 2016). With the current population of women having more comorbidities, the women are at an increased risk for postpartum complications. The nurses could potentially improve the maternal mortality rate by providing education about postpartum complications and providing follow-up

communication once the patient has been sent home. The nurses must be knowledgeable to adequately teach their patients about the warning signs associated with postpartum complications. Through this project I have been able to decrease the level of acuity of the patients who return for postpartum complications. The project question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from hospital increase the number of postpartum appointments attended at the women's health clinic in a 30- day period? If the women adhere to the postpartum education by reporting warning signs related to postpartum complications, and if the women attend their postpartum appointments, the maternal mortality and morbidity rate overall could be reduced.

Through the project the nurses are now able to offer resources such as lactation consultants following discharge, postpartum support for any questions or concerns once the patient has been discharged home. The patient now has direct access to a multidisciplinary health care team, and transportation resources. Post-partum care improves the health of women for future pregnancies and, positively affects the women's future overall health. Scheduling postpartum appointments could result in a reduction of health care costs associated with hospital readmissions by managing the postpartum condition on an outpatient basis (Son, et al., 2015). A hospital readmission can increase the workload of nurses since some of the complications require more attention and, more than one nurse when emergencies occur.

With the new process, the staff received education surrounding their new

workflow, and talking points to evaluate the patient's needs and reiterate the importance of postpartum care. Through this project, I have contributed to positive social change for the community by reducing maternal mortality and complications. After the implementation of the process improvement project the patients now have access to community resources, and health care if needed. Social change includes the staff has become more knowledgeable about resources and providing consistent education. The staff needs to remain current with current evidence-based practice to ensure that they are providing the patients with relevant information. Post-partum care improves overall population health by taking a preventative medicine approach. Also, postpartum care enhances the health of women for future pregnancies and impacts women's future overall health for the women of the community being served.

Summary

The practice problem is that many of the patients who receive prenatal care fail to return to the women's health clinic for postpartum care. The gap in practice is that the nursing staff has been inconsistent with providing education surrounding postpartum care. My purpose in this evidence-based DNP project was to develop a workflow that will provide the nurses with standardized education that they will be able to provide to their patients, and inpatient staff will provide the patients with their appointments prior to being discharged from the hospital. By providing education and postpartum follow-up appointments, my goal is to provide early detection and treatment for any postpartum complications and reduce the incidence of maternal mortality. In section 2, I will

introduce the Health promotion model (HPM), which focuses on preventative health measures and educating the patient to improve their lifestyle choices which will improve their overall health. In section 2, I will also discuss the role of the project team and my role as the DNP student in the project.

Section 2: Background and Context

Introduction

The women's health clinic where I implemented the EBP had a lack of postpartum care being provided because the women failed to return to the clinic for postpartum care. The patient population being served in the clinic include patients who receive Medicaid or are from a low-socioeconomic status. The patients that come to the women's health clinic were not being informed of the community resources for postpartum women. Prior to implementation the system did not have the staff schedule the postpartum appointments for the women to return to the clinic for postpartum care. Also, the nurses were not consistent with providing standardized education for the patients. Through this postpartum project, I helped to improve the overall health of women, increased the community's knowledge of postpartum complications, and reduced the hospital readmission rates associated with postpartum complications. The United States had an increase in maternal mortality of 25 % in the year 2014. To reduce the maternal mortality rate, the nurses provided standardized education and community resources to the patients. The patients now have their postpartum appointments scheduled prior to discharge in addition to scheduling the appointment, and the patients are

receiving a reminder phone call from the clinic at least 48 to 72 hours prior to the scheduled appointment, which has proven to motivate the patient to attend their postpartum appointment. Post-partum care allows for a more preventative approach where postpartum issues are addressed on an outpatient basis and has proven to reduce the number of hospital readmissions and maternal deaths resulting from postpartum complications. The project question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from hospital increase the number of postpartum appointments attended at the women's health clinic in a 30-day period? In section 2, I will include a review of concepts, models, and theories, frameworks, relevance to nursing practice, my role as the DNP student and background and context.

Concepts, Models, and Theories

Process improvement projects require evidence-based practice guidance or theoretical framework. The goal of increasing postpartum appointment attendance focuses on women's health promotion. The (HPM) emphasizes health promotion and disease prevention, which would guide the practice of educating the patients. The HPM was developed in 1996 to encourage the community to obtain screening for services (Pender, 1996). Pender's HPM has five key concepts: person, environment, nursing, health, and illness. The first assumptions of Pender's model are that health professionals constitute a portion of the patient's interpersonal environment, which helps to shape a person's influence throughout his/her lifespan. The second assumption is that individuals seek to regulate their behavior actively. According to the third assumption, self-initiated

reconfiguration of the person-environment interactive patterns is essential to changing behavior. Last, the HPM is focused on the potential for a disease that would cause the patient to improve their health behaviors (Pender, 1996).

The HPM assumptions has guided my DNP project by the nursing staff providing education, including available resources. The model uses a framework to understand an individual's history and personal perceptions of themselves to predict their health behaviors (Sanati, et al., 2013). An increase in the perceived benefits, and self-efficacy, as well as a reduction in the perceived barriers to attending postpartum appointments, are the strategies that are the basis of the DNP Project. The project was designed to promote healthy behaviors by scheduling postpartum care appointments and educating the patients. The nurses can recognize and manage any postpartum complications on an outpatient basis. Pender notes that early detection and intervention could lead to an improved quality of life and fewer costs associated with health problems (Naserpoor, et al., 2018).

Definition of Terms

Postpartum: The period immediately following the birth of an infant to 12 months after that period. During this period, the body undergoes many physiological changes where the female body returns to its prepregnancy state (Healthy, 2018).

Postpartum Complications: Include life-threatening and non-life-threatening conditions that occur after the delivery of an infant. The complications occur as a result of the woman's body returning to its prepregnancy state (2018).

Electronic medical or health record: (EMR/EHR) is the electronic medical or health record of a patient, containing their medical history from a health care system or hospital (Healthy, 2018).

Relevance to Nursing Practice

Prior to implementation of the EBP, in a local woman's health clinic, there was a lack of follow-up postpartum care. The nurses were not providing standardized education or scheduling the patient's postpartum appointment, which was creating additional workload for the nurses when patients return with serious complications. The lack of follow-up care was directly related to the nurse's lack of knowledge surrounding postpartum care. A recent study showed that many postpartum nurses are not well informed regarding the risk that women face in the postpartum period, so the nurses have failed to provide an adequate education for the patients (Bingham, et al., 2017). With nursing having a lack of awareness regarding postpartum care, the nurses in the women's health clinic had failed to consistently encourage postpartum care. When all the nurses in the clinic are not consistent with their information with the patients, there could be a disgruntled environment. Some nurses may feel that they are adequately educating their patients and think that they should not have to pick up the workload of the nurse that failed to provide proper education. It is imperative in nursing that everyone works as a team (Comerford & Shah, 2019). The issue of the nurses providing inconsistent education to the patients, was creating a lack of team morale, team communication, and work dissatisfaction. When there is a lack of communication, there is also a safety risk posed to the patient (Comerford & Shah, 2019). The nursing team needs to have consistent, relevant nursing training so that they remain current in practice (Comerford & Shah, 2019). By increasing the knowledge level of the entire team in a previous study, there

was an increase in team morale and a decrease in a posed safety risk to the patients (Comerford & Shah, 2019).

The education team or nursing leaders will need to provide current and consistent education so that the nursing team can work together to keep the patients safe. Jones (2017), in a recent article, "Oncology Nursing Retreat", noted that a great way to disseminate information is for the leader to host a nursing retreat. The survey that Jones provided the nurses revealed that nursing retreats are useful and that the nurses gained tools that can be used in their day to day operations. The author emphasized that when leaders wanted to disseminate information and improve team morale and communication that the leader would host a nursing staff retreat (Jones, 2017). Further, the author noted that morale was improved by a nursing retreat that was hosted by the nursing leaders, and there was a significant increase in team communication and improved job satisfaction (Jones, 2017). The nurses feel better equipped to perform their job responsibilities when they had proper training and great team communication (Muhawish, et al., 2019). In this DNP project, I address the gap in practice by providing standardized education to the nursing staff so that they are better prepared to educate their patients on the importance of postpartum care.

Local Background and Context

The state of Texas continues to see a significant increase in their maternal mortality rate from 2011 to 2014 the rate has doubled (Carroll, 2017). The hospital network located in northeast Texas has 570 acute-care beds and delivers approximately

6,000 babies each year (women's health director, personal communication, March 1, 2019). The project is being piloted initially at the clinic that has the least number of patients before introducing the project to the other 10 clinics within the network. In the local women's community health clinic in the northeast region of Texas, only 42% of women who receive prenatal care return for postpartum care follow-up (women's health director, personal communication, March 1, 2019). Of the women who deliver their babies at the hospital, there is currently a 35% postpartum complication rate after hospital discharge, of which half involve postpartum infection and bleeding (women's director, personal communication, March 1, 2019). Ideally, the patients who receive prenatal care in the women's clinic would return for their postpartum care; however, only 42% of the women are returning for postpartum care (women's health director, personal communication, March 1, 2019). My purpose in this postpartum project was to evaluate whether postpartum appointment attendance will improve whether the appointments are scheduled before hospital discharge in a 30-day period. The DNP project is in alignment with the hospital network's vision of being the leader of improving the quality outcomes of population health and improving access to health care. The project has help to encourage postpartum care by providing standardized education regarding postpartum care with efforts to improve the overall maternal mortality rate. Another goal that I had in the project was to remove barriers to health care so that the patients have improved access to care. It is imperative to assess health care access challenges to ensure that the patient has positive outcomes (Health, 2017). Post-partum complications cause additional

stress on families when the complications result in hospital readmission or even maternal death.

The community that these clinics serve is of lower socioeconomic background, multi-cultural, multiracial area. The community has been working with the county and the local chapter of the March of Dimes to improve the overall Maternal Mortality rate (women's health director, personal communication, March 1, 2019). The hospital network continues to work on their mission of transforming health care for their communities by collaborating with local churches, schools, and health department to improve health care (women's health director, personal communication, March 1, 2019).

The hospital network continues to work on their mission of transforming health care for their communities by collaborating with local churches, schools, and health department to improve health care (women's health director, personal communication, March 1, 2019).

In 2013, the Maternal Mortality and Morbidity Task Force were created by Senate Bill 495, 83rd Legislature, Regular Session, 2013, to study the maternal mortality and morbidity in the state of Texas (Baeva, et al., 2018). The goal of the task force is to review recent cases of maternal mortality, study trends and make recommendations to reduce the incidence of morbidity and mortality. Another responsibility of the taskforce will be to establish goals and expected outcomes for their role to help reduce the incidence of morbidity and mortality in the state. The purpose of Senate Bill 495, which was introduced on January 28, 2019, is to improve postpartum resources and education,

which is in alignment with the DNP project of increasing attendance by providing the woman with her postpartum appointment prior to discharge from the hospital (2019).

Role of the DNP Student

I am an obstetrical nurse and I have a vested interest to ensure that barriers to care are removed for patients in need of postpartum care to improve patient outcomes. My vested interest is that my responsibility is to improve the care that the network provides at the clinic. My interest focuses on making the community that we serve more engaged in their health care and equip the community with the knowledge they need to care for themselves. Managing complications before they arise, or as soon as they arise will decrease the amount of money spent for the family and facility on readmissions, and time spent on resolving issues. As a leader, I want to ensure that the nurses are providing care with a focus on health care prevention. As a doctoral student, I have been able to facilitate the DNP project by meeting with the Project team members, communicating with the team members, and evaluating the process of the DNP project. The members of the team included the women's health leaders, information technology team (EMR team), the women's health educators, the obstetricians, the clinic office staff, and the postpartum care unit staff.

First, as the project leader, I have been meeting with the project team to discuss the background and relevance for the postpartum care project along with the desired outcomes and necessary steps. Second, I have met with the nurse educators to discuss the type of education and how the team was going to disseminate the information. I attended

the education sessions to ensure that the information has been consistent with the desired outcomes of the project and provided feedback for opportunities for improvement.

Also, my role was to obtain postpartum care attendance data and the number of hospital readmissions related to postpartum complications one month before the implementation of the project. The reason behind examining the 1-month period is because the project is being piloted at the women's clinic that has the least amount of postpartum appointments attended before implementing the practice change at all 10 clinics within the network. By piloting the project in the clinic with the least number of postpartum appointments attended first allows streamlining of the project and the opportunity to make any necessary adjustments to the project if any concerns or problems arise. One-month postimplementation of the project, I requested data of how many postpartum appointments were made and were attended in a 30-day period. After the collection of data, my role was to update the executive leadership team on the progress and outcomes of the DNP project.

Role of the Project Team

The project team includes team members with many experiences. The members of the team include the women's health leaders, information technology team, the women's health educators, the obstetricians, the women's clinic office staff, and the postpartum care unit staff. The team has a collaborative vested interest to improve the overall quality of care being provided to the patients in the community. The team wants to improve the health of women in the community, and to continue to providing quality care, so that

women continue to deliver their baby at the hospital. The obstetrician made recommendations for postpartum education. The women's health leaders, women's health educators, and postpartum unit staff attended meetings regarding the project, provide resources for the staff and the patients, develop the standardized education regarding postpartum care, and approved the dissemination process for the education. The women's health leaders and educators of the team worked ensure the sustainability of the project once the project was implemented. The sustainability will be maintained by reviewing the appointments in the daily huddle and continuing to update the staff on the project monthly in staff meetings to ensure that everyone is following the process. Finally, the manager has been doing random chart audits to ensure compliance with the identifying flags and scheduling postpartum appointments. The Information technology team has developed and implemented the education regarding the EMR changes. The education sessions consisted of both EMR training and postpartum care education. The project team is a vital part of the implementation process and they have been collaborating with the Information technology department to ensure that the EMR identification flags were developed correctly. The information technology team provided EMR education for the usage of the identification flags. The entire team has been meeting continuously to continue addressing any issues or improvements that will be needed to improve the postpartum project.

Summary

The postpartum project is in alignment with the HPM because the project focuses on improving patient outcomes. The project's focus was to educate patients and to provide early detection and intervention for postpartum complications. The nursing staff must be properly educated regarding postpartum care to ensure that the patients receive the necessary information to assist them with receiving postpartum care. The DNP project is ideal because the State of Texas has an increasing maternal mortality rate where the Department of Human Services has developed a task force to review cases of maternal mortality. Review of the maternal mortality cases will assist the state and local community with the future steps to improve the maternal mortality rate in the local community. I have been leading and collaborating with the project team, which includes the women's health managers, and directors in the hospital to ensure proper implementation of the process and sustainability of the project. In section 3, I will discuss the literature review, as well as the use of the EMR-generated report as the form of data collection to analyze, organize, and to track the data. I will discuss key words that I used to conduct the source of evidence search, and search engines. I will use the data to determine whether the desired outcomes are directly related to the intervention.

Section 3: Collection and Analysis of Evidence

Introduction

The postpartum period begins after the delivery of the infant, and during this period, the female body is more susceptible to postpartum complications. To intervene early in the event of a postpartum complication, the provider must be able to detect the condition by providing postpartum care. Some of the complications can be life-threatening or affect the women's future health, so it is imperative that women follow-up with their health care providers after discharge from the hospital. The expected outcome of the DNP project was that the postpartum appointment attendance would increase after the implementation of providing standardized education for the woman postpartum and scheduling the postpartum follow-up appointment before being discharged from the postpartum unit. Because half of maternal deaths occur during the postpartum period, the increased postpartum appointment attendance could result in improved maternal morbidity and mortality (Carroll, 2017). The DNP project has proven to encourage more women to attend their postpartum appointments and be evaluated for postpartum complications that could potentially reduce the number of hospital readmissions.

The evidence-based quality improvement project with a quantitative design has helped me to identify that the patients who have their postpartum appointments scheduled before discharge, have a higher rate of postpartum appointments attended. Increasing the rate of attended postpartum appointments will positively affect the mother's overall health. The appointment data was compared to how many postpartum appointments were

attended prior to the project implementation versus how many appointments attended postimplementation. Also, increasing postpartum appointment attendance has assisted in reducing the negative affect on families related to postpartum complications.

In section 3, I will discuss the approach and rationale, participants, setting, data collection, data analysis, and synthesis of the postpartum project. Also, in section 3, I will cover the sources of evidence by using peer-reviewed journal articles from the Walden Library for the detailed literature review. I will identify the participants, ethics for the project, and the procedures of the project.

Practice Focused-Question

At the local women's clinic where the DNP project has been implemented, there was a lack of postpartum follow-up. Although there are 10 clinics within the hospital network, the project team piloted the project for 1 month at the clinic that has the least number of postpartum visits seen per month to evaluate if there was an increase in the postpartum visits attended. Of the women who come to the women's health clinic for prenatal care, only 42% return for postpartum care. The gap in practice is that the nurses have failed to provide consistent, standardized education due to having a decreased level of knowledge surrounding postpartum complications and resources. The nurses were unable to emphasize the importance of returning to the clinic for postpartum care, which allows for missed opportunities to provide routine and preventative care.

To improve population health in the community, women require knowledge about resources and potential complications. The women also lack knowledge associated with

how postpartum complications can impact their future health and fertility. To reduce the morbidity and mortality rate, it is vital that the women seek early detection and treatment by obtaining postpartum care. The project question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from hospital increase the number of postpartum appointments attended at the women's health clinic in a 30-day period?

Sources of Evidence

The focus of the review includes information from peer-reviewed articles that address the practice problem of decreased postpartum appointment attendance and decreased nursing knowledge surrounding postpartum care. Databases that I used for the literature review are MEDLINE, CINAL, PubMed, and the Texas Department of Health and Human Services. The search included articles about postpartum complications, deaths associated with postpartum complications, and cost associated with postpartum complications. I focused the search on using the key terms *postpartum care, postpartum complications, postpartum depression, postpartum hemorrhage and postpartum death, and postpartum education.* The timeframe that has been selected for the literature review search was from previous years beginning 2014 to the current year 2019. My primary goal using the search engines with the key terms was to review the literature that I found in the search that provided evidence-based supporting information for this project.

I used HPM assumptions to guide the DNP project by encouraging the nursing staff to provide education, including available resources, with the expected outcome that

there will be an increase in postpartum appointment attendance. Because health care professionals help shape the patient's environment surrounding their health it is essential for the nursing staff to educate the patients and assess their level of understanding to promote new health behaviors. The HPM guided the postpartum project so that the focus is on early preventative care, early detection, and treatment for postpartum complications.

Review of Findings

Clouse et al. (2017) used a convenience sample to determine if scheduling patient appointments and giving telephone reminders 24 hours before the appointment would increase the appointment attendance rate. A provider-initiated telephone protocol was used to increase knowledge related to psychiatric treatment and remind patients of their appointments the day before the initial visit. The clinic office staff educated the patients regarding the importance of psychiatric care and reminded them about their scheduled appointment. After the appointment protocol was implemented, fifteen patients attended the initial visit, resulting in a 26% reduction rate of no-show rates, from 27% the previous year to 20% in 3 months. The appointment scheduling process correlates with the project because the project focuses on educating women about the importance of postpartum care and encourages them to come to the clinic for care.

Missed appointments cost the U.S. health care system $150B each year (Gier, 2017). Health care providers should work to eliminate any barriers to patient care access. Patients should have access to patient self-scheduling and appointment reminders within 24-72 hours before the patient's appointment. According to Gier, it

is reported that when other facilities adopted appointment reminders that there was a dramatic increase in appointment attendance. The article also discusses that appointment attendance was significantly improved as a result of offering incentives such as gift cards. Appointment attendance can improve patient outcomes by focusing on a preventative approach to health care issues and reducing the cost associated with hospital readmissions and aggressive treatment for disease progression. The information in Gier (2017) supports the project on improving patient outcomes by taking a preventative approach to addressing postpartum complications. Through the project the clinic staff has implemented appointment reminders as well as the education needed regarding postpartum complications.

Kheirkhah et al. (2016) identified when patients fail to attend their follow-up appointments, it impacts the quality of health care delivery, cost associated with patient care, and resource planning. Examination of a retrospective cohort using administrative databases for fiscal years 1997 to 2008 determined that no-show appointments hurt the hospital's economic system. Delayed testing potentially puts patients at risk for delayed treatment and imposes a risk for further complications. Missed screening or patient no-shows may result in delayed disease detection or disease prevention. Reducing no-show rates can diminish cost and improve the quality of health care delivery.

Throughout the network, the women's health clinic had the highest missed appointment rate. There were several factors that contributed to the high rate of no-show appointments at the clinic. In the study, several interventions, such as including reminder

procedures, penalization, and overbooking, were attempted. The researchers could not conclude which method was more effective, because there were several different factors that contributed to patients not to attending their clinic appointments. The study helped to identify the factors that could be improved to increase the appointment attendance rate. Through the project, the health care providers were able to detect complications of postpartum early and provide early treatment of the complications.

Baeva et al., (2018), compared women's death records and reviewed medical records that confirmed pregnancy or delivery of an infant within 42 days of being postpartum and found there were 147 deaths. The study determined the mortality rate for 2012 to be the highest, however it was later identified that the mortality rate was miscalculated. Baeva identified the most accurate way to determine the maternal mortality rate is to compare the billing codes to birth records. The study supports the idea that the maternal mortality rate is continuously increasing and that there needs to be an intervention to work towards decreasing the maternal mortality and morbidity rate. The expected outcome of the project is that implementing standardized postpartum education and scheduling postpartum appointments will increase postpartum attendance. The increased postpartum appointment attendance will allow for early detection and treatment postpartum complications.

Bingham et al. (2017) reported that postpartum nurses have a knowledge deficit regarding postpartum complications. Three hundred seventy-two nurses completed a survey on how they felt their level of knowledge was regarding postpartum

complications. There were 54% of the nurses that reported that they knew the maternal mortality rate was continuing to increase, 12% knew the correct maternal mortality rate in the postpartum period and more than 90% were able to identify that PPH was the primary cause of maternal mortality. Ninety-five percent of the participants agreed that there was a correlation between maternal mortality and lack of nursing education. The study supports the project in its efforts to improve the knowledge level of nurses surrounding postpartum care issues.

According to Cooper et al. (2017), PPH management should begin early in antenatal care by identifying patients who have the greatest risk for developing PPH. Improving the clinical skills and knowledge of the team caring for maternal patients by identifying risk factors of PPH early are instrumental in preventing maternal morbidity and mortality. According to Cooper, improving teamwork has been proven to make maternity teams more effective and improve the quality of health care. The multidisciplinary team needs to identify the patients who are at risk for postpartum complications and begin early intervention. The health care team should be educated on the risk factors as well as how to manage the medical emergency. Evidence-based practice shows that multidisciplinary team training drills improve clinical and organizational outcomes. In the article, the entire team worked together to develop a plan that addressed how to communicate during the medical emergency effectively, and who to contact during the emergency.

The maternity nursing team implemented nursing education, which included simulation practice and postpartum mock codes to ensure preparedness for the medical emergency. The multi-disciplinary drills involved the nursing staff being educated on Advanced Cardiac Life Support (ACLS), Practical Obstetric Multi-Professional Training (PROMPT) and Managing Obstetric Emergencies and Trauma (MOET). The PROMPT and MOET training consisted of clinical staff such as obstetricians, midwives, anesthetists, and hematologists, as well as auxiliary staff such as porters and blood bank personnel.

The training involved lectures, small-group teaching, simulation, and training on models. ACLS training followed the American Heart Association training protocol. The team was able to work together to practice the obstetrical emergency drill and developed guidelines to improve safety for managing the care of obstetrical emergencies. The project focused on improving the team morale and communication and the quality of health care of the maternal patient.

Cássian de Oliveira (2019) performed an integrative review of literature from 2007 to 2017 and determined that PPH was the leading cause of maternal death. The study identified that it is imperative that the health care team, particularly the nurses, implement and follow evidence-based practices when caring for patients that have PPH. Nurses will need to work as a team to develop and contribute to the dissemination of health prevention strategies with the objective of preventing and treating this serious public health problem. Addressing the prevention of postpartum hemorrhage will help to

provide early detection and treatment expeditiously to prevent a medical emergency. The postpartum project allowed providers to perform early screening for risk factors to postpartum complications.

Participants

The chosen participants for the postpartum doctoral project are the members of the clinic staff and the postpartum unit staff. The team is comprised of two RNs and two LVNs from the clinic, two clerical front-desk staff, and the postpartum nurses who provided the discharge education. The clinic nurses' roles are to educate the patients regarding the importance of returning to the clinic for postpartum care. The team can interact with patients either in the women's health clinic office or at the hospital after delivery of the infant.

The participants were chosen because the nurses and the clerical staff are the individuals providing the education and the postpartum appointment. The nursing team reported a lack of education regarding the importance of postpartum care. However, the intent of this project was to educate the nursing staff regarding the risk factors associated with postpartum complications and to schedule postpartum appointments for the patients. Once the appointments have been scheduled, the clinic staff provided follow-up via phone calls and reminded the postpartum woman about the appointment 24 to 72 hours before the appointment. The expected outcome was that once the patients received postpartum education and postpartum appointments, the appointment attendance rate would increase.

Ethics

Institutional Review Board (IRB) approval from Walden University was received on September 6,2019. Data began being obtained on the same date at IRB approval. The numerical data preimplementation was collected by the clerical staff. Since the data source is from deidentified patient information, there are not any identified risks associated with this project. The evidence-based project does not involve any human subjects.

Procedures

Prior to the implementation of the project, at the end of each day the clerical staff were counting the number of postpartum appointments attended, and the number of patients seen or readmitted for postpartum complications. The data used is the number of postpartum appointments that have been attended in the last 30 days, and how many postpartum women required hospital readmission with conditions such as postpartum hemorrhage, infection/sepsis, preeclampsia, and postpartum depression within the last 30 days. The postpartum unit clerk had been counting the number of postpartum appointments that have been scheduled within the 30-day period of the women discharged from the postpartum unit. The preimplementation data has been compiled on an Excel spreadsheet, and stored on the secured hospital hard drive. The information is password protected.

The postimplementation data includes numerical data that has been obtained from the EMR. The EMR-generated report is downloaded by the office manager in the form of an Excel spreadsheet containing deidentified numerical data. The data obtained has been used to evaluate how the intervention has affected the amount of postpartum care delivered. All collected data is being kept on a secured hard drive within the hospital network, which is password protected. The only participants that have access to the reports include the women's health manager, director, and the office clerical staff.

While the preimplementation data was being collected, the women's health education team collaborated with the EMR team and developed education for the new EMR patient

identification process. The team has developed EMR education, and standardized postpartum education by the women's health educator. The education includes the warning signs associated with postpartum complications, the importance of postpartum care, and EMR training.

The education session includes a one two-hour mandatory education session. The education sessions were scheduled over three weeks with availability for the day shift nurses, and the night shift nurses. The educational sessions took place in the women's health conference room. Upon completion of the educational sessions, the staff began providing standardized education to the patients and scheduling the postpartum appointments.

The data was obtained 30 days post the intervention. The data that was obtained from the EMR generated report that included the number of postpartum appointments scheduled, and attended, and the number of hospital readmissions that resulted from a postpartum complication. The information was downloaded in the form of an Excel spreadsheet, and contains numerical data for comparison of pre and post implementation of the intervention. The project progress and details are discussed at the clinic's daily huddle to confirm the number of postpartum appointments that are scheduled for the day. Updated information is provided to the postpartum staff and clinic staff in the monthly staff meetings.

Analysis and Synthesis

Data for the analysis and synthesis of the information has been obtained from the women's health clinic staff who provided the deidentified data obtained from the EMR system. The EMR daily and monthly postpartum report is generated and stored on the hospital network hard drive. The report includes the total number of appointments attended, and the percentage of appointments attended for the month. Also, the report includes the number and percentage of patients readmitted to the hospital for postpartum complications. The EMR report is downloaded into an Excel 2016 worksheet, titled "Postpartum Appointment" report.

Analysis of the data took place using the Excel program to generate descriptive statistics. There was comparison of data for the number of postpartum appointments that have been attended and the number of women who required hospital readmission with conditions such as postpartum hemorrhage, infection/sepsis, preeclampsia, and postpartum depression for 30 days before and after the intervention implementation. The analysis evaluated how the intervention has affected the amount of postpartum care delivered before and after the intervention has been implemented. The postpartum resources include a designated nurse in the clinic whose primary role is to triage and provide further instructions for patients with postpartum complications. There is also a lactation consultant available to assist with any breastfeeding questions or concerns. Evaluation of the standardized education also included comparing the number of patients who sought early treatment for postpartum complications as a result of the standardized

education that was provided to the patients. The patient's knowledge of when to seek health care did increase the patient visits and improve their access to care.

The number of postpartum appointments scheduled and attended in comparison preimplementation and postimplementation of the project were examined. The expected outcome was that there will be an increase in postpartum appointment attendance because they were scheduled prior to discharge and a reminder was sent to the patient regarding the postpartum appointment. Scheduling the patient’s appointment did increase patient visits and improve their access to care.

Summary

The literature review was conducted using MEDLINE, CINAL, PubMed, Texas Department of Health and Human Services. The sources of evidence have concluded that lack of follow-up care increases the cost associated with postpartum complications. Also, educating patients and providing follow-up reminder phone calls has been proven to increase appointment attendance.

The analysis and synthesis of the project was performed preimplementation and postimplementation. The data was obtained and compared to assess whether the intervention improved appointment attendance, and decreased hospital readmissions associated with postpartum complications such as postpartum hemorrhage, infection, preeclampsia, and postpartum depression. An EMR-generated report of deidentified aggregate data was used to analyze the project data. The data elements included the number of patients seen in the women’s health clinic for postpartum care. The EMR

report also provided the numerical data, including the number of women, admitted to the hospital for postpartum complications.

The data elements were used to measure whether the intervention of postpartum education and scheduling the patient's postpartum appointment increased the number of postpartum appointments attended. In section 4, I will discuss the outcomes and implications of the evidence-based intervention, recommendations collected postimplementation from the results of the intervention, and the strengths and limitations of the project. In section 4, I will also discuss any recommendations for future solutions for the project, and contributions of the doctoral project team.

Section 4: Findings and Recommendations

Introduction

The nursing staff in the women's health clinic were not consistent with providing education regarding potential postpartum complications and encouraging postpartum care. The local women's health clinic had a 42% postpartum care appointment rate of the women who received prenatal care in the clinic. The gap in practice was that the nursing staff were not providing consistent postpartum education. Also, the patients were not being scheduled a postpartum appointment so that they knew when to return for postpartum care. The practice question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from the hospital increase the number of postpartum appointments attended in a 30-day period? The purpose of the postpartum EBP was to provide the nursing staff with education with potential postpartum complications to help them feel more competent in educating postpartum patients. The team began educating the patients following the educational intervention. I collected postintervention data for the first 30 days following the intervention using an EMR-generated report. In addition, the nursed provided each patient with a postpartum appointment before she was discharged from the hospital. In section 4, I present the findings, implications, recommendations, contribution of the doctoral project team, and strengths and limitations of the project.

Summary of Findings

My goal for this quality improvement project was to increase postpartum appointment attendance. Post-partum care leads to early detection of risks associated with postpartum care (Baeva, et al., 2018). I used this project to help answer the following research question: Did scheduling the postpartum care follow-up appointment before the woman's discharge from the hospital increase the number of postpartum appointments attended in 30 days? My first objective was to create standardized education for the nurses regarding postpartum complications and the warning signs to report. My second objective was to determine if the 30-day postintervention of standardized education and scheduling patients' postpartum appointments showed an increase in postpartum appointment attendance at the women's clinic.

Objective 1: Create Standardized Education for the Nursing Staff for Postpartum Complications Following the AWOHNN POSTBIRTH Standards.

To develop education, I met with the Women's Health Education department to review the AWOHNN POSTBIRTH warning signs, and when the patient should contact the provider. The staff educational sessions included two training sessions that were scheduled over three weeks. The educational sessions took place in the women's health conference room. The entire women's health clinic staff including, the LVNs and RNs, and clerical staff, completed their sessions. The postpartum staff, including the RNs and unit secretaries, all completed the education sessions. One RN was away on maternity leave, so an additional session was added for make-up within the 3-week time frame. The

standardized education for the patients consisted of the AWOHNN POSTBIRTH warning signs. The nurses were instructed on how to use the Save YOUR LIFE form that AWOHNN created to facilitate discharge education to increase families' and patients' knowledge of when and how to seek postpartum care. The SAVE YOUR LIFE form has information for the patient and the family member, which states who to call and when to contact a provider. The instructions identify conditions when 911 should be called, which included pain in the chest, obstructed breathing, seizures, thoughts of harming self or baby. The patients and their families are to contact a provider when the woman has bleeding soaking through a pad within an hour, or blood clots the size of an egg or bigger, an incision that is not healing, temperature of 100.4°F, a headache that has not resolved with medication, and visual changes. The bottom section of the form identifies who the health care provider is and the location of the nearest hospital. The patient then signs the form acknowledging that they received the information and that they understood the information. The patient receives a duplicate copy of the form, and the original copy is scanned into the patient's chart for verification of receipt.

Objective 2: To compare data to determine if the thirty-day postintervention of standardized education and scheduling patient postpartum appointments showed an increase in postpartum appointment attendance at the women's clinic.

The EMR team developed training specifically for the nursing staff and clerical staff for the purpose of scheduling appointments. The EMR team provided instructions that included how to add flags to the EMR for the purpose of identifying the phase of the

pregnancy that the patient is in. The prenatal flag is added at the time of the initial prenatal visit in the women's health clinic, and the postpartum flag is added at time of delivery of the baby on the postpartum unit to generate the postpartum report.

The EMR training consisted of 30 minutes of live interactive training, where the staff could practice each step of the training process. The first step consisted of how to schedule the postpartum appointment. The second step involved correctly selecting postpartum as the appointment type. In the third step the staff selected the postpartum patient based on the identification flag and then printed the appointment reminder to attach to the discharge paperwork.

Upon completion of the educational sessions, the staff began providing standardized education to the patients. The objective was achieved by collecting preintervention data from the EMR for 30 days to determine the postpartum appointment attendance. The report included the number of postpartum appointments attended prior to the implementation of the EBP and the percentage of the appointments attended for the entire clinic for the period of August 2, 2019, to September 6, 2019, excluding Sundays. I compiled the data into an Excel spreadsheet. When examining the preintervention data, I found that there were 720 appointment times available to postpartum women among the three providers who provided postpartum care in the clinic (Table 2). Of the 720 appointments available, only 334 patients (46.3%) who received prenatal care in the clinic returned for their postpartum appointment. When patients schedule appointments

but fail to attend the appointments that impacts patient outcomes and increase the cost of health care. (McLean et al., 2016; Starr, 2011; Perron et al., 2010).

Table 2

Number of Appointments Postpartum appointmens attended Preintervention period

	2019 August	2019 Sept	Total	Percentage
Available appointments	624	96	720	100%
Appointments attended	275	59	334	46.3%

On September 6, 2019 the staff began providing the standardized education and scheduling postpartum appointments prior to discharge from the postpartum unit. The unit manager held a staff meeting to clarify any questions or concerns regarding the EBP intervention. The women's health managers informed the staff that the mangers were going to be doing chart audits to ensure that the patients are receiving the postpartum education and postpartum appointments. The staff were also instructed to contact all the women who had delivered their babies within the last thirty days to provide them a postpartum appointment and the standardized education over the phone. Contacting the women who had delivered their babies within the last 30 days provided the project team with additional time to determine if the intervention would increase the number of postpartum appointments attended.

The postintervention dates included September 6, 2019 to October 10, 2019. The report included the number of postpartum appointments made and attended after implementation of the EBP project. The data was placed in an Excel spreadsheet which was retrieved by the clinic manager. The postintervention data showed that there were 720 appointment times available to postpartum women among the three providers who provided postpartum care in the clinic (Table 3). Out of the 720 appointments available, 448 patients (62.22%) who received prenatal care in the clinic returned for their postpartum appointment. The postintervention data shows a 15.92 % increase in postpartum appointment attendance.

Table 3

Number of appointments Postpartum appointmens attended Postintervention period

	2019	2019		
	Sept	Oct.	Total	Percentage
Available appointments	504	216	720	100%
Appointments attended	312	136	448	62.22%

The project initiative used a before and after design to determine if the educational intervention did increase the number of postpartum appointments attended. Quantitative methodology is a preferred method when looking at assessing objective information that will be used to describe and report numerical data (Kleinpel, 2013). The

impetus for this project was the continually increasing maternal mortality rate in the state of Texas. The EBP intervention did increase the number of postpartum appointments attended from 46.3% to 62.22%. Also, calling the patients 24 to 72 hours before the scheduled appointment to remind the patient of her appointment was found to be helpful. One of the main contributing factors to the patient's no-show rate seemed to be related to the lack of patient appointment reminders. When reminders are provided to the patients, the rates of no-show appointments decreased (Kheirkhah, et al., 2016; Pender, 2011; Samuels et al., 2015). The findings indicate that providing standardized education and scheduling appointments for the patients was an excellent strategy for increasing patient appointment attendance.

The EBP project improved patient's health outcomes by removing barriers to appointment scheduling and access to care. Barriers to appointment scheduling can lead to a disruption in the continuity of care, that in turn leads to poor health outcomes (Liu, 2016). It is imperative to educate the patients about the consequences that are associated with missed appointments and a lack of prenatal care.

Individuals

When patients are engaged in their self-care, they are more knowledgeable about the importance of preventative care (Ozdemir, et al., 2018). Preventative care and early treatment provide an opportunity to reduce postpartum complications. The increase in postpartum attended appointments allows the patients to receive the preventative postpartum care that is needed. The EBP also has helped to improve the confidence level

of the nurses. When a nurse is knowledgeable, he/she can provide safe, competent nursing care (Bingham, et al., 2017). The nursing staff report feeling more knowledgeable about the postpartum education that they are providing (women's health director, personal communication, October 1, 2019).

Communities

The EBP was developed to help improve the knowledge surrounding the need for postpartum care, and to increase the postpartum care attendance. When patients understand the importance and the need for postpartum care, they become more engaged in self-care (Bingham, et al., 2017). The hospital network has partnered with the March of Dimes in the community. A recent meeting with the representative from the March of Dimes office revealed that the patients appeared more engaged in their postpartum care. The patients have been asking the nurses who manage the postpartum program relevant questions related to their postpartum care. There was an increase in attendance in the March of Dimes postpartum program as well. The March of Dimes director attributes the increase in the postpartum program attendance to the postpartum education that is being provided to the patients at discharge (women's health director, October 1, 2019).

Institutions

The EBP project was piloted at the clinic that had the smallest volume of postpartum attendance first. Since the project was successful, it will now be implemented at the other nine clinics. The project team has begun to look at the other sites to begin implementation. There are meetings in the process of being scheduled so that the staff at

the clinics understand the purpose of the project. The clinic staff will attend the staff training sessions to understand the new workflow. The providers have agreed that the initiative has been useful and that they are projecting an increase of postpartum appointments at all 10 sites (women's health director, personal communication, October 1, 2019). Improving postpartum education, and communication with patients is essential to enhancing postpartum care (Bingham, et al., 2017). The education of the postpartum nurses and increased communication with the patients because of the EBP project have helped to address complications as they have occurred and prevent further progression of complications (Bingham, et al., 2017).

Recommendations

The implementation of this project took place over eight weeks. In my role as the DNP student, it was my responsibility to collaborate with the project team to develop education for the postpartum staff and the clinic staff. Also, my role was to work with the EMR team to develop flags for postpartum identification. The project findings reflect that the intervention has positively influenced the postpartum appointment attendance.

One recommendation to increase postpartum appointment attendance would be to implement text messaging for reminders of the appointment. Text messaging would be a great way to send appointment reminders to patients. There are 73% of Americans that use their cell phones for this purpose and 83% of all Americans own a cell phone (Lin et al., 2016; Smith, 2011). A second recommendation to improve appointment attendance would be to offer incentives for appointment attendance. The incentives could include

baby items such as diapers, blankets, gift cards and towels. The hospital network is currently working to identify a source of grant funding for the incentives. Incentives have been proven to impact appointment attendance positively (Gier, 2017).

Strengths and limitations of the project

Strengths

One strength of this project is the eagerness of the nursing staff to learn new information for the sake of patient safety. The nursing team had the desire to make a change to improve patient care as they felt like they lacked the knowledge to educate their patients. The nursing staff influences the patients since they are the individuals providing patient care. The nursing team served as an integral part of the EBP project because they were providing the intervention to the patients. According to Pender, health care professionals are a portion of the patient's environment, which helps to shape their influence on self-care management (Pender, 1996).

Another strength of the project included the functionality of the EMR to retrieve data. The EMR served as the primary source of data collection, which facilitated capture of the data regarding appointment attendance. Through the functionality of the EMR, the staff were able to place identifying flags on patients' chart to identify them as pregnant or postpartum patients. The proper identification of the patients helped to identify the gaps in health care so that the health care team can improve the quality of care provided. The EMR is an excellent source of data collection to assist the health care workers in identifying and correcting issues in health care (Salkind, 2010).

Limitations

A limitation of the EBP project was the time needed to collect the data for pre and post the intervention. Preintervention data was collected for 30 days, and the

postintervention data were collected for 30 days due to time constraints for finishing the DNP program. The project was a pilot program at the women's health clinic that had the least amount of attended postpartum appointments. Only a small number of patients received the intervention because it was a pilot program. The EBP project will be implemented in clinics with a larger volume of postpartum appointments. Once the project has been implemented at the other clinic sites, then the project team will be able to identify if the postpartum appointment attendance increases after the intervention. The project site will continue to collect the appointment data for six months to one year after the intervention to determine if the appointment attendance is improving.

Summary and Conclusion

The basis of the EBP project was to increase the patient's knowledge about postpartum health care so that there would be an increase in the amount of postpartum care being provided at the women's health center. The EBP project team met their first objective of developing education by collaborating with the entire team to develop standardized education that would help the nurses to feel more competent when providing education and care to their patients. The strength of the EBP project was that the nurses were eager to learn more details about postpartum care so that they could improve the quality of care that is rendered to patients. The second objective was met by educating the nursing and clerical staff about the correct steps of how to apply the identification flags to the patient chart. The training was administered through interactive training sessions,

which allowed the staff the opportunity to practice the skills learned in the training sessions.

The EBP project was implemented, and after reviewing 30 days of data, the data revealed that there was an increase in the number of postpartum appointments attended. The EBP project compared the data of 30 days preintervention to 30 days of postintervention, which showed a 15.92% increase in appointment attendance. The EBP project not only increased the appointment attendance, but the project also increased the knowledge and confidence level of the nurses.

The recommendations that could potentially improve the EBP project would be to include the use of technology by providing appointment reminders through cellphone text messaging. Another recommendation would be for the hospital network to take advantage of some of the state-funded postpartum initiatives to obtain funding for providing incentives. The incentives would also be used to encourage women to attend their postpartum appointments.

There were a few limitations to the EBP project. The project was being piloted at the women's clinic that had the least amount of postpartum appointments attended. Since the project was a pilot, there was only a limited number of patients that received the intervention. The amount of the time for the project was also limited due to the project being a pilot. In section 5, the dissemination plan and analysis of self will be addressed.

Section 5: Dissemination Plan

Introduction

The EBP project was implemented successfully with the assistance of the project team and clinic staff. My primary goal in this project was to educate the nurses regarding the complications that may be encountered during the postpartum period so that the nurses would begin to provide standardized education to the patients. Also, the nursing staff received training to ensure that they identified the patient as being pregnant or a postpartum patient. The nursing staff also received training for appointment scheduling, so that the staff would schedule appointments before the patient is discharged from the hospital. The problem addressed at the project site was that postpartum appointment attendance was low. The gap in practice was that the nurses lacked knowledge surrounding the complications that are associated with the postpartum period, and that there were barriers to appointment scheduling for the patients. The barriers for patient appointment scheduling included a lack of knowledge surrounding the need for postpartum care and a lack of knowledge of how to steps to take to schedule the postpartum appointments. The practice question was: Does scheduling the postpartum care follow-up appointment before the woman's discharge from the hospital increase the number of postpartum appointments attended in a 30-day period? In Section 5, I will present the dissemination plan, and the analysis of self.

Dissemination Plan

I presented the project findings to the executive leadership team and the nursing care team at their leadership meetings via a PowerPoint presentation. The audience included the leadership team and the providers. The executive leadership has requested that the information from the project be disseminated through leadership training. The woman's health manager has been designated as the new lead for the project to serve as the liaison for the EBP project. The women's health manager will develop a process flow map to serve as a guide to assist the other unit or clinic managers who will be implementing the project. (women's health director, personal communication, October 21, 2019).

The nursing clinic and outpatient clinic leaders will attend training sessions in the women's health conference room to understand the process of the project. The training sessions will be offered once a month for 6 months, providing outpatient clinic leaders, supervisors, and team leads the opportunity to attend more than one training session. At the end of each training session, there will be an opportunity for questions and answers. The women's health manager will collaborate with the EMR team to facilitate the training sessions for the patient flag identification system. The EMR team will work with the leaders of the primary health clinics to determine the type of identification flags that will need to be used for their patients. During the leadership training sessions, the leaders of the community clinics and the inpatient units can use live interactive training to practice appointment scheduling and practice using the patient identification flags. When

nurses can learn skills in a live interactive setting, they tend to feel more confident in using the skill (Comerford & Shah, 2019). After the training sessions, the community clinics will collaborate with the hospital inpatient units to implement the project in the primary health care settings.

The appropriate venue where the project can be applied would be in any outpatient setting that schedules patient appointments. The appropriate audience would be the leadership team in the outpatient clinic settings, the nursing staff, providers, and the patients of those outpatient settings. The number of 30-day readmissions have increased as a result of patient appointment no-show rates (Rupali, Lucia, & David, 2017). Implementing the postpartum EBP project has proven to improve the patient appointment attendance with the intervention of standardized education and scheduling the patient's appointment. In addition, providing patients with appointment reminders has also increased patient appointment attendance (Clouse et al., 2017). The project is useful to establish follow-up care for patients that have been admitted into the hospital and to educate patients about the importance of follow-care for their specific health condition.

Analysis of Self

Practitioner

My role during this project was the EBP project manager for the Women's Health Clinics. My responsibilities included process improvements to improve the overall quality of care being provided in the clinics. As a DNP graduate, I will have increased opportunities available to improve the quality of nursing care. Within those roles, I will

be able to apply the skills that I have obtained on the journey of obtaining my DNP. In my current role as a nurse educator, I will be able to develop nursing curriculums using evidence-based practice, and to use problem-solving to improve the quality of nursing care that is provided. Those skills include strong leadership abilities, implementing evidence-based literature review into practice, and problem-solving. The DNP project has allowed me to develop an intervention that impacts a state-wide health care problem of maternal mortality, which aligns with the DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health. DNP Essential VII focuses on improving the health of communities or individuals. DNP Essential VII also focuses on building skills of DNP nurses to assess cultural and the psychosocial aspects, and how they both impact an individual's health (AACN, 2006). According to Walsh, improving a patient's knowledge level about their condition has been proven to improve the patient's level of engagement, which improves the patient's outcomes (Walsh, 2017). My primary purpose for obtaining the DNP degree is to enhance the quality of care that is provided to the patients, which is in alignment with DNP Essential II Organizational and Systems Leadership for Quality of Improvement. DNP Essential II focuses on the evaluation and translating evidence-based research into nursing practice (AACN, 2006).

Scholar

As a DNP prepared nurse, I have been prepared to develop clinical practice guidelines by researching evidence-based research. I will practice scholarship by translating evidence-based research into clinical practice with the focus of improving the

quality of health care. As a DNP nurse, I will use the knowledge learned, such as organizational leadership skills, analytical skills, and to continue process improvements. College of nursing will need influential leaders that will be able to guide faculty, students, and staff to create a new curriculum that will align with the current health care climate (Christiansen &Champion, 2018). The experience that I have gained from doing the postpartum EBP project has helped me to increase my knowledge to do a thorough literature review, translate evidence into practice, and to improve my leadership abilities. The postpartum project process was an opportunity for me to showcase the skill set of leadership, developing clinical practice guidelines, and evaluating practice outcomes (AACN, 2006).

Project Manager

As the project manager, I found that I had to have strong leadership skills to keep the project team focused and organized. The DNP prepared nurse must possess strong leadership abilities to make quality improvements with the patient being the center of focus (Sherrod, & Goda, 2016). During the planning and implementation phase, I gained experience in identifying a problem and developing a plan to address the issue. I had to use my leadership skills to work with a group of leaders who had different opinions on how to improve the quality of care that was being provided in the women's health clinics. Leaders are responsible for finding ways to keep their team engaged and improving team morale (Muhawish, et al., 2019). As a DNP student, I was able to gain the skills of managing a team and evaluating the outcomes of the projects. The ability to manage a

project is an essential skill needed to make changes within health care and impact patient outcomes. In order to impact change in health care, the organization will need skillful leaders that can assist individuals through the continuum of the process to change (Gatti-Petito et al.,2013). As I worked on my DNP project, I was able to facilitate communication among the project team and the nursing staff for the success of the project. As a project lead, I was presented with some challenges related to meeting schedules. The team was devised of members from the leadership team and EMR team, which all had very limited availability in their schedules. Throughout the process of managing the meetings, I had to learn to be creative with the type of meeting that was held, and the times, and locations. In some of the meetings, we used the technology of Zoom or Microsoft Teams. Many leaders report increased job satisfaction from the use of technology for meetings. Using sources of technology for meetings helps employees to save time in their day when they are not going to several different locations for meetings (Ivanov & Cyr, 2014). Learning to be flexible and creative was vital to meet the goals of the project. Another challenge that presented itself was that patients sometimes had disconnected phone numbers, which meant that we had to send a letter for the patient to contact the clinic or contact their emergency contact for updated demographic information. I also suggested that the hospital implement requiring two emergency contacts on file as opposed to just one. Another recommendation for the project was to have the postpartum discharge nurse confirm all demographic and emergency contact information before the patient being discharged.

What This Project Means for Future Professional Development

The DNP program has taught me patience and endurance. The EBP project has helped me to develop better communication and collaboration skills, which will enable me to work on a nursing curriculum improvement taskforce. I will be able to collaborate with other nursing faculty to improve the current processes that are in place within the academic setting. My long-term professional goal is to improve the quality of nursing education at a community college or university. As an educator, it is imperative that the DNP prepared nurse to identify gaps in nursing to improve the quality of care being provided (Christiansen & Champion, 2018). The education that is provided directly impacts the quality of nursing care that will be provided. My goal for improving education is to focus on improving clinical thinking, critical reasoning, and equipping the student to be able to apply the knowledge learned directly to the patient. The ability to apply nursing knowledge to the patient is vital because it allows the practicing nurse to focus on the entire patient. DNP nurses that are prepared as advanced practice nurses will be able to redesign, evaluate, and disseminate the results of quality improvement projects to promote safe, cost-effective, and efficient patient-centered care (Sherrod, & Goda, 2016). Throughout the project in my professional career, the DNP program has equipped me to learn to do a more focused literature review. Once the gap in practice has been identified, I was able to search for potential interventions for the problem by selecting keywords related to the problem. I can apply the skills and knowledge of policy development to research the Board of Nursing policies and requirements and compare

them to the current educational practices that are in place. As an executive leader, the DNP graduate will understand organizational and policy implications to develop policies that promote positive health outcomes for the patients (Sherrod, & Goda, 2016).

Summary

Postpartum care allows providers to provide preventative care and can prevent further progression of any postpartum complications. Understanding the needs of the patient population is imperative so that the interventions are designed to get the intended results. The community of women who are being served by the women's health clinic had a knowledge deficit regarding the importance of postpartum care. The goal of this DNP project was to provide an educational intervention to the postpartum nursing team to help increase postpartum appointment attendance. The project intervention has proven to be an effective intervention for getting patients more engaged in their health care by increasing their knowledge about postpartum health care.

The dissemination plan for the project included presenting the postpartum project to the executive leadership team and providing training for the primary health care community clinic leaders. The training sessions will allow the leaders to learn about the project, practice the skills of appointment scheduling, and ask questions about the process of the project. An appropriate future venue for this project could be a private provider's office, community clinics, or any outpatient setting that has a low appointment attendance rate. The appropriate audience to disseminate the project would include providers, nursing staff, patients, and executive leaders.

As a DNP graduate, I will have more opportunities to make positive changes that will impact the quality of health care. In my current role as a nurse educator, I plan to review nursing curriculums and implement evidence-based changes that will improve the quality of nursing education that is provided to the students. As a DNP graduate, I have been prepared to translate evidence-based research into clinical practice by doing a thorough literature review. In the role of the project leader, I will continue to develop my leadership skills and collaborate with my colleagues to improve nursing education. The EBP project has prepared me to be able to redesign, evaluate, and disseminate the results of quality improvement projects, and improve nursing curriculums.

The project aligns with Walden University's mission statement of making a positive impact of social change by providing education to women within a community to improve population health. Increased postpartum appointment attendance can lead to early detection and treatment of postpartum complications, which could lead to improved patient outcomes. The goal of the project was to improve population health by increasing postpartum care, which will impact the community's overall increased maternal mortality rate.

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