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Promoting Shared Decision Making Through Patient Education of Labor Inductions

Lenora W.Y. Low
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Walden University

College of Health Sciences

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Lenora Low

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2015

Abstract

Promoting Shared Decision Making Through Patient Education of Labor Inductions

by

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BSN, University of Hawaii, 1986

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

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Abstract

The induction of labor is medically indicated for many conditions in which delivering the baby outweighs the risk of continuing the pregnancy. Patients admitted for the induction of labor require adequate information to actively participate in decision making that affects their plan of care. The purpose of this quality improvement project was to improve the quality of healthcare delivery and promote patient engagement by providing consistent education using a teaching tool. The project question addressed the impact of a labor-induction teaching tool on improving patient education, participation, and overall satisfaction. The Plan-Do-Study-Act (PDSA) model was used to plan, implement, and evaluate the labor-induction teaching tool in a 9-room labor and delivery unit that averages approximately 1,500 births per year. The teaching tool content was obtained from existing patient education information from the organization's resource library. The nurses piloted the teaching tool for all patients admitted for the induction of labor for 3 weeks. Patient comments supported the use of the teaching tool to improve knowledge, increase participation in decision making, and enhance overall satisfaction. The nurses voluntarily completed an online survey that indicated the teaching tool was easy to use, positively impacted workflow, and supported informed choice. Patient charts were audited and showed a 94% compliance with documentation of education. The success of the teaching tool in improving patient education and decision-making capacity supports the development of other teaching tools, encourages patient and family-centered care, and improves the delivery of quality care.

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Dedication

I would like to dedicate this paper to Stefan, Sam, Maia, and Chloe. You mean more to me than you will ever know. Your love and support has gotten me through rough times, made the wonderful times even more amazing, and made me excited to embrace all that the future may bring.

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Section 1: Overview of the Evidence-Based Project

Achieving excellent patient outcomes is the result of a partnership between healthcare providers and healthcare consumers. Healthcare providers apply the most current evidence-based knowledge to practice, and healthcare consumers need to have an adequate level of information to be active participants in healthcare partnerships. Pregnancy and childbirth are excellent opportunities for women to partner with their obstetrician (OB) to create a birth plan for a normal delivery. However, there are situations that may arise that require some medical intervention, such as the induction of labor. The induction of labor is the use of medications or methods to promote uterine contractions prior to the onset of spontaneous labor (Wing, 2014). There are many medical indications for labor induction because the risk to the mother or fetus of continuing the pregnancy outweighs the risk of early delivery. Pregnant women who are admitted for induction of labor require adequate information about the indication for induction, methods of induction, and alternatives in order to actively engage in decisions regarding their delivery experience. The decision to induce labor needs to be discussed thoroughly with the patient, including the risks and benefits. There may be multiple decision points before and during labor that should include the patient's input (Simpson, 2014). Shared decision making includes providing enough information to the patient so that she and her partner can actively participate in developing the plan of care. The lack of adequate education can lead to unrealistic expectations and patient dissatisfaction with her care (George, 2013). Shared decision making "acknowledges the patient's preferences, lets the patient make informed choices, and shows respect for the patient's

choices” (George, 2013, p. 65). In this paper I present a quality improvement process to promote active patient participation in shared decision making through the use of a labor-induction teaching tool.

Background

The induction of labor is becoming more common as medical comorbidities complicate pregnancy and as updated definitions and treatment of diseases during pregnancy guide medical care (Grivell, Reilly, Oakey, Chan, & Dodd, 2011). Some medical indications for inductions include premature rupture of membranes, preeclampsia or other hypertensive disorders, maternal diabetes, fetal demise, intrauterine growth restriction, prolonged pregnancy past 42 weeks gestation, multiple gestation pregnancy, chorioamnionitis, placental abnormalities, or fetal anomalies (Wing, 2014). There are risks associated with any induction of labor; the OB, together with the patient, must determine if the benefits outweigh the risks. Some complications associated with inductions are hyperstimulation of uterine contractions, uterine rupture, fetal distress, and possible risk of C-section (Wilson, Effken, & Butler, 2009). In 2013, the American Congress of Obstetricians and Gynecologists (ACOG) revised the definitions of hypertensive disorders affecting pregnancy and developed recommendations for the care of these women (Simpson, 2014). Since then, the number of inductions of labor due to medical concerns has increased (Simpson, 2014). The duration of labor inductions has also been lengthened from an average of 8-10 hours to several days, increasing the likelihood of C-sections, patient fatigue and frustration, and patient dissatisfaction (Frederiks, Lee, & Dekker, 2012). Elective inductions of labor after 39 weeks gestation

may also be done for nonmedical reasons, but certain criteria must be met to ensure that elective inductions are in the best interest of the mother and baby, and not for convenience (Simpson, 2014).

During my routine patient rounds after delivery at the project site, I noticed that many patients expressed frustration with the length of time from admission to delivery, the lack of understanding of the labor induction process, and inadequate input into their plan of care. These patients were happy that their baby was healthy and they had a safe delivery, but would have liked to have had a better understanding of the induction process so they could have known what to expect. Multiple patients at the project site stated they received a wide variety of labor induction education prior to delivery. All of the patients that I rounded on expressed trust in their OB and believed that the OB had recommended the safest course and they did not want to go against their OB's advice. I also noted that many of these patients mentioned that they did not know what questions to ask; not knowing what to expect was a common source of stress during labor.

Through informal discussion with nurses and physicians at the project site, I observed inconsistency in the amount and type of education provided to patients about labor induction, which varied from doctor to doctor and nurse to nurse. Some nurses stated that they explained the medication used but did not describe the labor induction process in detail. Others said they explained everything to the patient, from multiple doses of medications to pain management to the possibility of a C-section. After discussions with the staff and physicians, I concluded that the patient's health literacy,

the nurse's comfort level in providing education, and the teaching style of the physician or nurse also contributed to the variation in patient education.

Education and comprehension of information are needed for patients to be actively involved in their plan of care. The lack of patient engagement in decision making during labor and delivery leads to unrealistic expectations, frustration with the delivery process and care, and overall dissatisfaction with the delivery experience (Jimenez, Klein, Hivon, & Mason, 2010). In healthcare organizations, patient satisfaction with the care experience is one indicator of patient-centered care (Carman et al., 2013). The willingness to recommend the hospital to others and the overall satisfaction scores reflect how well patients perceive they are receiving high quality care and how well the hospital staff met their expectations (Frith, Anderson, & Sewell, 2010). Including the patient and her family in informed decision making and enhancing the care experience are important in improving overall satisfaction (Sahlsten, Larsson, Sjöström, & Plos, 2009).

Problem Statement

The lack of consistent patient education on the labor induction process leads to the patient's inability to be an active participant in decision making during labor and delivery, contributing to overall frustration and dissatisfaction with the care experience.

Project Question

How does using a teaching tool on labor induction impact patient education, participation in decision making, and satisfaction with the delivery experience?

Purpose Statement

The purpose of the project was to improve the quality of healthcare for patients admitted for labor induction by providing consistent education using a labor-induction teaching tool with the intent of increasing patient knowledge about the labor-induction process, promoting patient participation in decision making, facilitating patient and family-centered care, and improving patient satisfaction with the delivery experience.

Project Objectives

1. This project will demonstrate the positive impact of a labor-induction teaching tool on patient knowledge, participation in decision making, and satisfaction.
2. This project will show the effect of education and engagement on patient satisfaction with the delivery experience.
3. This project will generate information about the use of a labor-induction teaching tool to enhance the delivery of patient education by labor and delivery nurses.

Evidence-Based Significance and Social Implications for Practice

Empowering patients with knowledge so they can be active participants in decision making is an ethical and social imperative for all healthcare professionals. One of the core concepts of patient and family-centered care is collaboration, in which patients and families are fully supported to become active members of the healthcare team. Together with healthcare providers, the patient and family jointly contribute to the patient's plan of care and health goals (Jimenez et al., 2010). Patient-centered care is fundamental to modern healthcare because it promotes self-determination by the patient, encourages patient accountability for his or her health, improves patient satisfaction, and

creates health partnerships with the patient and family (Elwyn et al. 2012). The relationship between patient and healthcare provider sets the foundation for an equally respectful partnership where there is trust, communication, and mutual goals (Cribb & Entwistle, 2011). The combination of the expertise of the healthcare provider and the personal beliefs and values of the patient contribute to an individually designed care strategy. However, bidirectional information sharing is necessary for the collaboration to be mutually beneficial (Moore, Low, Titler, Dalton, & Sampsel, 2014). The healthcare provider needs to provide necessary education, and the patient needs to communicate health beliefs and preferences. Appropriate education can also help patients manage expectations and improve patient satisfaction with the care experience (Holzmueller, Wu, & Pronovost, 2012).

In the labor and delivery environment, providing patient and family-centered care includes giving the patient and partner enough information to make informed choices. Many women have detailed birth plans that indicate their preferences. Their well thought out plans can be disrupted when an unforeseen complication or condition arises. When medical interventions are needed, such as labor inductions, the patient and partner need to be informed of the risks and benefits so they can actively engage in the decision making with their medical team and maintain some control of their birth experience (Jimenez et al., 2010). The patient needs to understand the process of labor induction, possible consequences, and options. Without this information, the patient is subjected to the plans of the medical team without any input or choice. While many women defer to their OB for direction when complications arise, they also need to know that they have the right to

receive information and the right to have input in the new plan. Fear of endangering the baby and loss of control of the situation can inhibit women from sharing their concerns (Moore & Low, 2014). The patient's decision-making capacity is affected by the amount of information provided, the patient's personal beliefs and values, and the patient's ability to cope with the situation (Barello, Graffigna, & Vegni, 2012). The era of paternalistic medicine when care was done "to" or "for" the patient is obsolete; working in partnerships with patients in which decisions are made with the patient drives healthcare today (Carman et al., 2013).

Nature of the Project

A quality improvement approach was used to improve patient education about labor induction and facilitate patient participation in active decision making. The Plan-Do-Study-Act (PDSA) model was used to assess, plan, implement, and evaluate interventions. The PDSA model is a systematic, cyclical framework for continuous improvement of processes or programs (Kelly, 2011). Following the PDSA framework for quality improvement allowed for review of current practices and processes that limit patient participation in shared decision making, plan for interventions to improve patient education and empower patients to be actively engaged with their care, and analysis of the results of the interventions to determine whether goals were met. As a quality improvement project, current evidence-based knowledge was applied to existing practices to improve patient outcomes.

Assumptions and Limitations

This project was limited to one medical center, which is the only regional medical center for a large, national health maintenance organization (HMO). The patients were members of the HMO health plan and could receive care only at this facility. The OBs and Certified Nurse Midwives (CNMs) only work at this medical center. The practice of labor induction education refers to that which is practiced at this facility, and may not represent the practice of labor induction education at other non-affiliated maternity hospitals in the state. I also assumed that patients wanted information and desired to actively participate in decision making to some degree. Informed choice is every patient's right, and while not all patients exercise their right to actively participate in their care, I assumed that there would be some labor induction patients who would want to share in decision making based on informed choice.

Summary

Shared decision making and full partnership in the healthcare team are the hallmarks of patient and family-centered healthcare. Pregnancy and childbirth are normal, natural processes; many healthcare consumers want to be able to work with their medical team to have the birth experience they have envisioned. When a medical procedure such as labor induction is needed, it can be quite concerning for the new mother and her partner. Informed decision making is a process of bidirectional knowledge exchange between the patient and healthcare provider that uses evidence-based education to support personal preferences (Simpson, Newman, & Chirino, 2010). Education about the labor induction process, possible outcomes, and options can give the pregnant woman an

opportunity to be an active participant in her plan of care and exercise informed choice. A quality improvement approach provided the structure for assessing current patient education processes and implementing an evidence-based teaching tool to enhance patient education and facilitate patient participation in shared decision making.

Section 2: Review of Scholarly Literature

Standardized educational tools can promote patient participation in active decision making; labor induction education can help patients better manage expectations and improve patient satisfaction (Lee & Emanuel, 2013). Many research studies have been conducted on labor inductions, patient education, and shared decision making that support the need for standardized education tools to facilitate patient engagement (Henderson & Redshaw 2013). A review of the literature was conducted using the following keywords: *induction of labor, labor management practices, patient satisfaction with labor induction, patient education of labor induction, shared decision making, informed choices, patient centered care, and patient and family centered care*. I used the Walden Library databases, specifically CINAHL with Full Text, PubMed, Science Direct, and Ovid. I also used Google Scholar to search for relevant literature from 2009 to 2015.

Labor Induction

There was abundant research about labor inductions including indications for labor induction, types of labor induction, labor induction practices, risks of labor induction, consequences to mother and newborn with labor inductions, and patient experience with labor inductions. Bijlenga et al. (2011), Marroquin, Tutorica, Salafia, Hecht, & Mikhail (2013), World Health Organization (2011), and Wing (2014) studied the indications and process of labor induction. Bijlenga et al. (2011) conducted a multicenter, randomized control study on the health-related quality of life of women with gestational hypertension or preeclampsia who had an induction of labor. Bijlenga et al.'s

study was conducted simultaneously with the Hypertension and Preeclampsia Intervention Trial at Term (HYPITAT) that was conducted to determine the best medical management of women with gestational hypertension or preeclampsia. While the HYPITAT trial indicated that induction of labor resulted in improved maternal and neonatal outcomes, Bijlenga et al. found that there was no negative impact on the health-related quality of life indicators in women who experienced labor inductions for gestational hypertension or preeclampsia.

Marroquin et al. (2013) researched the factors that were associated with successful induction, defined as vaginal delivery within 24 hours of admission. Marroquin et al. found that younger maternal age, lower maternal weight, use of Pitocin during labor, and artificial rupture of membranes contributed to successful induction. These results can help obstetricians predict the patients who are most likely to have successful induction of labor. Because of the variation in practice, new definitions of gestational hypertension and preeclampsia, recommendations from the HYPITAT study, and the effort to reduce elective labor inductions before 39 weeks gestational age, the World Health Organization (WHO) created practice recommendations for labor induction to improve patient safety and health outcomes. The basis of the WHO recommendations is derived from systematic reviews of current randomized controlled studies. Wing (2014) conducted a systematic review of current literature on the indications and process of labor induction. Wing summarized the research on indications of labor induction, predicting successful induction, contraindications, associated risks, and recommended induction practices in a practice guideline for clinical use.

There were several studies on the types or methods of labor induction. Balci, Mahmoud, Acar, & Colakoglu (2010), Suffecool, Rosenn, Kam, Mushi, Foroutan, & Hererra (2014), and Melamed, Ben-Haroush, Kremer, Hod, Yogev, (2010) investigated the efficacies of various labor induction techniques. Balci et al. (2010) compared the use of vaginal Misoprostol with Pitocin versus the use of Pitocin alone and found that the combination of Misoprostol and Pitocin significantly shortened the time from start of induction to delivery. Suffecool et al. (2014) studied the use of a double balloon catheter versus the use of dinoprostone in nulliparous women undergoing labor induction. Suffecool et al. found that the use of the double balloon catheter resulted in shorter induction-start-to-delivery times. Melamed et al. (2010) conducted a retrospective cohort study on factors associated with the failure of prostaglandin E₂ (PGE₂); Melamed et al. found that multiple factors such as nulliparity, maternal age, maternal weight, and other characteristics may affect the effectiveness of PGE₂ in the induction of labor.

The results from these studies explained the factors associated with labor, induction, and its success; awareness of these limitations can facilitate the selection of the optimal method of labor induction. Because of the variety of labor induction methods, the OB can choose from numerous methods based on the patient's condition, experience and success rate with each technique, and availability of required medication and equipment. The number of labor induction techniques contributes to the complexity of labor induction education. With multiple options for induction, the OB needs to explain the choices to the patient and justify the recommended induction technique.

Numerous studies were conducted on the risks and consequences associated with labor induction. Frederiks et al. (2012), Gerli, Favilli, Giordano, Bini, & Di Renzo (2013), Grivell et al. (2011), Hernandez, Korst, Goddwin, Miller, Caughey, & Ouzounian (2010), Tam, Conte, Schuler, Malang, & Roque (2010), Wilson et al. (2009), Moore & Low (2012), Simpson (2014), and Kim et al. (2010) conducted research on the risks and outcomes of labor induction. Gerli et al. (2013), Wilson et al. (2009), and Simpson (2014) specifically studied the effects of labor induction on C-section rates. Frederiks et al. (2012) defined a failed induction as delivery via C-section. Frederiks et al. used a retrospective cohort study over a 12-month period to review the charts of 400 nulliparous women. Frederiks et al. found that prolonged active labor was the only independent intrapartum factor that increased the rate of failed inductions, resulting in higher C-section rates. Grivell et al. (2011) conducted a cohort study to examine maternal and neonatal outcomes based on gestational age and onset of labor. Grivell et al. concluded that nonrecognized indications for labor inductions (elective inductions) resulted in higher C-section rates, instrument-assisted vaginal births, increased infant resuscitation, more frequent admissions to the neonatal intensive care unit (NICU), and phototherapy.

Hernandez et al. (2010) reviewed the risk of elective induction of delivery at 39 weeks gestation as compared to expectant management of spontaneous labor. Hernandez et al. used a retrospective approach to review the data on over 14,000 women. Hernandez et al. determined that women who had elective inductions before 39 weeks gestation experienced poorer maternal and neonatal outcomes; in addition, women who were expectantly managed had better outcomes unless they experienced late pregnancy

complications. Tam et al. (2012), using a retrospective approach, studied the outcomes of low-risk term women who had elective inductions. Tam et al. reviewed 848 charts and discovered that women who were induced with a Foley bulb or dinoprostone had longer inductions and were more likely to have a C-section. Gerli et al. (2013) conducted a retrospective cohort study on the effects of labor induction, specifically with prostaglandin inductions, on C-section rates. Gerli et al. discovered that only prolonged pregnancy increased the C-section rate. Wilson et al. (2009) used a cross-sectional retrospective descriptive study to examine the risks of labor induction on C-section rates. Wilson et al.'s study was unique in that it not only accounted for patient demographics as contributors to C-sections, it also accounted for the influence of hospital and provider influences. Wilson et al. found an increased C-section rate for induction patients based on age, parity, race, level of education, hospital teaching status, and number of prenatal visits. Moore and Low (2012) conducted a systematic review of research on elective inductions and risks of C-sections. Moore and Low separated the contributing factors into patient factors, provider factors, and organization factors. Patient factors included preference, trust, fear, and pressure. Provider factors included patient request, financial incentives, and knowledge deficit. Organization factors included culture, lack of accountability, and competition with other hospitals. Moore and Low highlighted the influences of various factors that can lead to increased inductions, higher C-section rates, and decreased quality of care. Simpson (2014) conducted a systematic review of current research on C-sections, medical interventions, and new definitions of labor. Simpson's

review showed an increase in the number of labor inductions and epidural placements that prolong natural labor.

With increased understanding of the new definitions of labor and an awareness of medical interventions that prolong labor, obstetrical providers can use this evidence-based information to reduce the risk of C-sections in healthy women. As there are possible maternal and newborn complications with labor induction, patients need to be well informed of the risks. Explaining the need for labor induction and possible complications can help the patient and OB decide on the best course of action.

Several researchers examined the effect of education of labor induction on patients' perception and delivery experience. Enabor, Obayemi, Bello, & Adedokun (2012), Tong, Mackeen, & Berghella (2012), and Simpson et al. (2010) researched knowledge and labor induction. Enabor et al. (2012) used a questionnaire to do a cross sectional study of antepartum patients in Nigeria. Enabor et al. wanted to determine whether these patients were aware of labor induction techniques, the purpose of induction, and perceptions of labor induction. Enabor et al. found that knowledge of labor induction varied, with most information obtained from health classes or staff; most patients expected a more painful labor with inductions. The differences in knowledge and perception demonstrated a greater need for prenatal education of labor inductions. Tong et al. (2012) compared standardized counseling on labor induction to nonstandardized counseling to improve patient knowledge. Women who experienced induction of labor needed more information and reported lower satisfaction with their delivery experience. Tong et al. conducted a prospective study to determine whether standardized counseling

would increase patient knowledge of labor induction. The patients who received standardized counseling demonstrated a stronger knowledge of labor induction as compared to those who received nonstandardized education (Tong et al., 2012). Tong et al. concluded that standardized education was more effective in increasing patient knowledge, which could lead to more realistic expectations and improved patient satisfaction with the delivery experience. Simpson et al. (2010) studied the effect of childbirth education on women's decision to have elective inductions. Using a questionnaire, Simpson et al. gathered information on patient demographics, attendance of childbirth education classes, satisfaction with the delivery experience, and adequacy of information to make informed choices. Simpson et al. found that childbirth education classes enhanced the delivery experience and provided enough information for the patient to make informed decisions.

The inability to meet a patient's expectation of her delivery experience can lead to patient dissatisfaction. The research showed that appropriate education provided patients with a better understanding of the labor induction process that led to more realistic expectations. Patient satisfaction with the delivery experience is reflected in required HCAHPS surveys, the results of which are publicly posted and can affect the hospital's reputation, brand marketing, and revenue (Barello et al., 2012).

In summary, several studies demonstrated that many factors affect the outcome of labor inductions. Knowledge of the appropriate indications for induction, options for induction, and possible risks and consequences to the mother and newborn give the obstetrical provider the evidence-based information to discuss the most beneficial

treatment plan with the patient. The multiple options of labor induction add to the complexity of the patient understanding of the process; effective patient education of the process and possible complications increase patient understanding and support patient engagement in the decision making. Patients have the right to informed choice of labor induction, which gives patients more control of their delivery experience. Inclusion in the decision making, appropriate education, and open communication with the healthcare team can increase patient satisfaction with the overall care and improve patient safety.

Active Decision Making and Patient Engagement

Patient engagement and active participation in decision making leads to increased patient satisfaction, improved quality of care, and enhanced patient safety (Barry & Edgman-Levitan, 2014). As interest has shifted from paternalistic medical care to patient and family-centered care, there has been much interest and research in patient engagement and shared decision making. Barello et al. (2012), Barry and Edgman-Levitan (2014), Coulter (2012), Holzmueller et al. (2012), Legare and Witteman (2013), Elwyn et al. (2011), and Lee and Emanuel (2013) studied shared decision making and its effect on patient care quality. The researchers examined the relationship between patient and care provider as the foundation for shared decision making. Providers needed to give patients evidence-based information so the patients could make the best choice for themselves with respect to their beliefs and values (Coulter, 2012). Nonjudgmental support of the patient's preferences reflected respect and mutual trust (Barello et al., 2012).

Pregnancy and childbirth is an excellent environment to practice shared decision making and patient engagement (Goldberg, 2009). Romano (2012), Jacobson, Zlatnik, Kennedy, & Lyndon (2013), Goldberg (2009), and Moore, Low et al. (2014) studied informed decision making in the maternity environment. Romano (2012) explored the Transforming Maternity Care (TMC) project: “2020 Vision for a High-Quality, High-Value Maternity Care System” and “Blueprint for Action: Steps toward a High Quality, High Value Maternity Care System”. The 2020 Vision and Blueprint for Action generated legislative support for quality maternity care, including support for shared decision making in maternity. Romano explored the use of decision aides to improve education, reduce anxiety, support informed choice, and improve patient satisfaction. As a result of the support generated for improved quality of maternity care, an initiative called Expecting More was created as the first national maternity shared decision-making program. The Expecting More program developed decision aids to help mothers become more active in decision making. Romano explained the coordinated efforts of organizations and the government to create programs to support mothers as active participants in their care and to promote education to facilitate informed choice. Jacobson et al. (2013) studied nurses’ perception of patients’ informed decisions during labor and delivery, provider-patient communication, and patient safety. Jacobson et al. discovered that nurses felt that patient engagement was important to patient safety. This finding showed that communication strategies influenced patients’ perception and ability to fully participate in decision making, even if the intent was to promote patient safety. Healthcare providers need to be aware of the effects of how they communicate on

patients' decision making capacity. Goldberg (2009) explored the issues of informed decision making in maternity care. Informed choices in maternity care were described as complex with multiple contributing factors. The patient needed adequate information regarding risks, benefits, and options as well as encouragement from healthcare providers to feel empowered to actively participate in decision making. Goldberg concluded that the benefits of informed decisions include improved patient safety, increased patient satisfaction, and enhanced self-care for mother and baby. Moore, Low et al. (2014) used a qualitative research method to learn about women's perception of their labor induction experience, the reason for their choice of induction, and their participation in the decision making. Moore, Low et al. concluded that most women did not want to go against the recommendations of their OBs and felt that they did not understand the labor induction process or alternatives enough to actively participate in the decision making. Moore, Low et al. suggested that more education was needed to support patient engagement in decision making.

As much as obstetrical providers believe that they are engaging patients in their intrapartum care, specifically regarding medical interventions such as labor inductions, several studies showed that patients did not feel they had enough information to actively participate in the decision making during labor (Skyrme, 2014). Jimenez et al. (2010), Stevens and Miller (2012), and Skyrme (2014) researched informed choice and active decision making of labor induction. Jimenez et al. (2010) examined women's birth experiences and the amount of information and knowledge they received prenatally. Jimenez et al.'s study showed that most of their study participants thought they had

enough information during their pregnancy, but expressed a lack of shared decision making and education about options during labor and delivery. Jimenez et al. concluded that the inadequate information and collaborative decision making in the hospital indicated that the women's informed choice was not an organizational priority. Stevens and Miller (2012) studied the effect of healthcare providers' communication styles on women's participation in decision making and informed choice. Stevens and Miller defined shared decision making as an equal partnership between patient and provider and an informed choice model where the patient takes on more decision making responsibility. Stevens and Miller examined directive versus non-directive communication styles and their affect on patient choice versus patient compliance. Stevens and Miller showed that communication style significantly affected patient engagement and preferences for labor induction. Non-directive communication supported shared decision making and patient engagement; informational communication without provider bias encouraged patients to ask questions, empowered patients to actively in their care, and promoted informed choices. Skyrme (2014) explored the culture and relationship between providers and patients. The majority of women developed a trusting relationship with their obstetrical provider during prenatal care; this relationship encouraged women to trust the advice and guidance of their provider. Providing information and options to medical interventions is the ethical obligation of providers and demonstrated respect for their patient's preferences. Skyrme noted that information needed to be given so patients could make an informed choice, not to be given in order to secure compliance. Labor induction has been accepted as a routine intervention;

providers and patients often did not question the necessity of the intervention. In spite of the frequency with which labor inductions are performed, patients needed to have the information about risks and benefits to be able to make an informed choice.

The benefits of active decision making and patient engagement in maternity are well documented in the literature. Improved patient safety and health outcomes and increased patient satisfaction result from informed decision making (Moore, Low et al., 2014). Healthcare providers need to be aware of how the information is presented, as communication styles can influence patient behavior and perception (Stevens & Miller, 2012). By providing evidence-based information about risks and benefits, and giving alternatives, the patient has an increased decisional capacity to make the right choice with respect to her values and beliefs.

Theoretical Framework

The theoretical framework for this project was the Health Belief Model (HBM). The HBM is a model derived from behavioral science theories that centered on the attitudes and beliefs of people to direct behavior (McEwen & Wills, 2011). It was originally created by social psychologists in the 1950's to understand and increase the community's utilization of preventative health services (McEwen & Wills 2011). They theorized that people were afraid of diseases and that fear motivated them to engage in health-promoting behavior; the degree of fear of the disease directly affected the degree of motivation. As a person was more afraid of the consequences of the disease, the person was more motivated to engage in health-promoting behavior (Hodges & Videto, 2011). The main components of the HBM are perceived susceptibility, perceived severity,

perceived benefits, and perceived barriers (Hodges & Videto, 2011). With the HBM, people are more likely to engage in health-promoting behavior if they believe that they are susceptible to an undesirable consequence (Carpenter, 2010). The HBM is a supportive theoretical framework for pregnancy, labor induction education promotion, and patient engagement; a healthy baby is a great motivator as pregnant women are likely to engage in health-promoting behaviors if they believe that it will help them to have a healthy baby. In order to have a normal pregnancy and healthy baby, a pregnant woman may be more mindful of her diet, exercise, and engage in healthier behaviors. A pregnant woman is more likely to follow the suggestions of her obstetrician if there is any perceived harm to the baby or herself. In addition, the greater the severity of the negative consequence, the more motivated the person is to avoid that consequence (Carpenter, 2010). Pregnant women need to be informed of risks and benefits of any treatment or medication during her pregnancy and delivery so she can make the right choice for herself in partnership with her OB. A woman is more easily convinced to have a C-section if she were told that there was an imminent danger to her baby. The fear of harm to the baby will easily persuade the woman to do whatever is necessary to save the baby. The HBM also suggests that a person will assess the possible effectiveness versus the cost of the intervention before choosing to engage in the activity. If a pregnant woman fears that she will anger or annoy her obstetrician with too many questions, she may refrain from asking important questions. Conversely, the patient is more likely to engage in open dialogue with the staff if she is encouraged to ask questions and nurses consistently take the time to respond appropriately. The confidence of the person in her

ability to perform the desired action also affects her choice. In summary, a person's belief about health conditions, benefits and risks of interventions, and self-efficacy can affect how they engage in health-promotional actions, such as active participation in decision making.

The HBM strongly supports education to help pregnant women make informed choices and influence healthy behavior. Women admitted for labor inductions were provided appropriate information so they were involved in their plan of care and made appropriate choices that respected their beliefs and values. All labor induction patients were informed about the reason for the labor induction, process of labor induction, options, and possible maternal and fetal consequences of waiting for spontaneous labor. The patients had opportunities to ask questions and verbalized understanding of the severity of the disease process that necessitated the induction of labor. The patient education helped these patients weigh the susceptibility and severity of the treatment and possible consequences. Perceived benefits and barriers were also discussed; the patients determined that the induction of labor was acceptable and supported their OB's decision to proceed with the labor induction. The empowerment of induction education led to informed choices, active participation in decision making and realistic expectations; the women were more satisfied with their delivery experience, even when labor induction was necessary. The HBM provided the theoretical structure to develop the care management of women with labor induction using education and patient advocacy to promote engagement and active participation in decision making.

Framework for Quality Improvement Process

The Institute for Healthcare Improvement supports the use of the Model for Improvement questions prior to the PDSA model (Davis, 2015). The questions help to explore and refine the problem before using the PDSA model to test possible improvement ideas. The three questions are: “1. What are we trying to accomplish? 2. How will we know that a change is an improvement? 3. What changes can we make that will result in improvement?” (Davis, 2015, p.16). The responses to these questions are: 1) consistent labor-induction education can promote active participation in shared decision making and increase patient satisfaction of the birth experience, 2) a labor induction teaching tool is an improvement because patients have asked for more information about labor induction in order to better understand what to expect, and 3) trial and evaluate the impact of the labor-induction teaching tool on patient engagement and satisfaction.

The first step of the PDSA quality improvement model was planning. Planning involved identifying an opportunity, analyzing the problem, and propose modifications for improvement (Kelly, 2011). The cause and effect diagram, also known as the fishbone or Ishikawa diagram, was used to analyze the problem and the outcomes (Hewitt-Taylor, 2012). The visual diagram of the causes and links to the problem helped to simplify the complex problem of causal analysis; it allowed for a thorough evaluation of each contributing factor, connected them to each other and to the problem. For this project, the problem was lack of patient participation in shared decision making and patient dissatisfaction with the delivery experience. Causes included inadequate education and information of the labor induction process which resulted in decreased decisional

capacity, lack of teaching tools to support education, variability of staff confidence with providing teaching, lack of time to provide the information, and lack of accountability for providing patient education (see Appendix C). The “do” component of the PDSA model consisted of the implementation of a labor induction-teaching tool for all patients admitted for the induction of labor for a 3 week trial period. For the “study” component of the PDSA model, I interviewed patients who received patient education with the labor-induction teaching tool and elicited their feedback on the education, their involvement with the plan of care, and their satisfaction with the delivery experience. In addition, I used an online survey to obtain the opinion of the nurses on their satisfaction with the teaching tool and impact on their workflow, thoughts on the effect of education on patient engagement, and any suggestions for modifications to the tool. I audited the electronic medical records for compliance with documentation of the labor induction education. The feedback from the patients and staff was used to improve the teaching tool and process, and contributed to the full implementation of the teaching tool, corresponding to the “act” of the improvement model.

Summary

Existing evidence-based research substantiated the variation in labor induction practices, the need for patient education to promote active participation in decision making, and the improvement in patient safety and satisfaction through patient and family-centered care (Barry & Edgman-Levitan, 2012, Carman et al., 2013, Coulter, 2012, Elwyn et al., 2012, Goldberg, 2009, Lee & Emmanuel, 2013, Tong et al., 2012). Informed choice and a patient’s ability to actively engage in decision making is directly impacted

by the amount of education the patient receives (Tong et al., 2012). In addition, the patient's satisfaction with their care was directly related to their ability to actively participate in decision making (Moore, Low et al., 2014). In spite of the abundant research that showed the positive effect of education on patient participation in decision making, there continued to be a lack of adequate, consistent patient education about the labor induction process. This gap contributed to the patient's inability to actively engage in care discussions and led to unmet expectations and dissatisfaction. The literature review and utilizing the Health Belief Model as the theoretical framework supported the need for consistent education development and promotion of patient engagement; the quality improvement model of PDSA was used to structure the improvement process to test the teaching tool and assess effectiveness in enhancing the patient's decisional capacity and patient satisfaction.

Section 3: Approach

The inconsistency in patient education resulted in the need for teaching tools to enhance patient-centered care in the labor induction process (Romano, 2012). The utilization of a labor-induction teaching tool by labor and delivery nurses improved patient engagement, patient participation in active decision making, and patient satisfaction with the delivery experience. Using a teaching tool also enhanced the nurse's workflow and reinforced the nurse-patient relationship. In addition, the nurses advanced patient participation in decision making by supporting the patient in the process and acting as a patient advocate (George, 2013). The development and design of this project includes discussion of the setting and sampling, project design and methodology, data collection, data analysis, and project evaluation plan.

Project Approach

The purpose of the project was to improve patient education through the use of a teaching tool by labor and delivery nurses for patients admitted for labor induction. Increased patient knowledge about the labor induction process and promotion of patient participation in decision making resulted in enhanced care delivery. The quality improvement model that was used to address labor induction education and the impact on shared decision making was the Plan-Do-Study-Act (PDSA) model. The PDSA quality improvement model uses systematic, cyclical components to develop, implement, and evaluate process changes. According to the Institute for Healthcare Improvement (2014), "The PDSA cycle is shorthand for testing a change by developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the consequences

(Study), and determining what modifications should be made to the test (Act)” (para 1). Quality improvement models take existing practice, apply the most current evidence-based knowledge to interventions, and analyze the results of the intervention to improve patient outcomes (Kelly, 2011). Quality healthcare is the expectation of all patients receiving care and the goal for healthcare organizations and providers. Quality means different things to different people. Ultimately, the patient determines the definition of quality. Using the PDSA method to improve patient education of labor induction and providing adequate information to support informed choice improved the quality of care delivered to patients admitted for the induction of labor.

Project Setting

The project site was a nine-room labor and delivery unit that averages approximately 1,500 births per year. The hospital is the regional medical center for a health maintenance organization that is part of a national healthcare network. The labor and delivery unit was staffed with five to six registered nurses, one obstetrical technician, and one ward clerk per shift, depending on the unit census. There was an OB and CNM or medical resident present on the unit 24 hours a day, 7 days a week. The unit also included two operating rooms and a postanesthesia care unit for C-sections. There was a level III neonatal intensive care unit with either a neonatologist or neonatal nurse practitioner present at all times in the facility.

Sampling

All patients who were admitted for an induction of labor received labor induction education with the teaching tool after the nurses were trained. After delivery, 10

postpartum patients who had labor induction education with the teaching tool were interviewed. The convenience sample of 10 patients was based on 10% of the average birth census and average number of labor inductions per month for the previous year. The staff survey was sent to all of the nursing staff with the goal of obtaining 25 nurse responses (50% of nursing staff).

Data Collection

Procedures

Permission was obtained from both Walden University's and the project site's Institution Review Board prior to project implementation (09-22-15-0327879). Anecdotal information obtained from routine patient and staff rounds provided the baseline and background information. The labor-induction teaching tool content was obtained from existing evidence-based patient education resources within the project site's educational library. After the labor and delivery nurses were trained in the use of the teaching tool, it was piloted for 3 weeks. After the pilot, postpartum patients who received labor induction education with the teaching tool were interviewed in their private room on the mother-baby unit before discharge. The interviews included questions in Appendix A to explore patients' satisfaction with the labor induction education, ability to participate in decision making, and overall satisfaction with the birth experience. The patients were also asked for any suggestions to improve the education or to provide feedback on the teaching tool.

In addition, the nurses were asked to voluntarily complete a survey on the ease of use of the teaching tool, impact on workflow, and perception of patient engagement. The survey was administered via Survey Monkey for anonymity and ease of respondent

submission. Because I am the director of specialty nursing at the project site with oversight of the labor and delivery nurses, it was important that the surveys were anonymous and participation in the survey was completely voluntary. The staff were made aware that this project was necessary for completion of my doctoral degree and was not related to their employment.

The charts of patients who received the labor induction education with the teaching tool were audited for compliance of teaching documentation. After any patient education, the nurses were expected to document the completion of the education, assessment of patient readiness to learn, and patient understanding of the education topic. During the study, documentation of patient education of labor induction indicated that patients were provided with the necessary information to make informed choices.

Teaching Tool

The teaching tool consisted of general information about the labor induction process, medications or procedures that may be used, alternatives and options, and possible complications. The content was derived from labor induction education from the project site's database that is used at other facilities within the organizational network. The teaching tool was used for any patient who was admitted for labor induction, regardless of the indication for induction, to provide consistent information about the labor induction process. Nurses used the teaching tool as a guide that included talking points, and was not used as a self-study module by patients. The interaction between nurse and patient was essential for building their relationship as well as encouraging questions and dialogue. At any time, the OB provider could have been included in the

teaching to add to the information presented. After the teaching tool content was compiled and configured in an easy to use format, the labor and delivery nurses were trained on its use. The nurses' competency with using the teaching tool was validated with return demonstration, using each other as practice patients.

Instruments

The survey questions were created for the specific purpose of this project. The patient questions (Appendix A) were used for patient interviews. The patient questions were open ended, with the intent to solicit their feedback about the labor induction education and teaching tool, their perception of their ability to be involved with decision making, suggestions for improvement, and overall satisfaction with the process. The seven questions were used as the template for patient interviews. Some of the patient responses led to other questions to explore the patient's perspective or to elicit more details about her response.

The nurses were asked to voluntarily complete the staff survey (Appendix B) after the 3-week pilot. The survey was administered via Survey Monkey and consisted of two Likert-scale questions and four open-ended questions. The staff survey was used to obtain their feedback on the ease of use of the teaching tool, the impact of using the tool on their workflow, their perception of enhanced education on the patient's ability to ask questions and be involved in shared decision making, their suggestions for improving the teaching tool, and their suggestions for other topics of future teaching tools.

Data Analysis

The information obtained from patient interviews following the pilot was analyzed using content analysis of the responses to the open-ended questions and then summarized. I expected that patient responses would determine whether the teaching tool on labor induction was successful in increasing the patient's ability to ask questions and become more active in decision making. The patient responses would also serve to improve the teaching tool, content, and presentation. In addition, I anticipated that the patient's satisfaction with the labor induction education and overall birth experience could lead to the development of future teaching tools to support patient education.

The quantitative data obtained from the staff surveys were summarized, and qualitative data obtained from responses to open-ended questions were analyzed using content analysis and then summarized. I expected that the staff responses would provide insight into the use of teaching tools to supplement patient education, improve the nurse's ability to provide effective education, and enhance the nurse's perception of the impact of education on patient's decision-making capacity and engagement. In addition, the staff surveys would provide suggestions for improving the teaching tool and generating ideas for future teaching tool topics.

Chart audits provided information about staff compliance with documenting patient education of labor induction. Documentation of education, specifically labor induction education, demonstrated that the teaching was completed and consistent. Patient education is a care delivery standard at the project site, and all nurses are expected to document teaching as part of the plan of care.

Project Evaluation Plan

The information obtained from patient interviews and staff surveys led to increased knowledge about the use of decision aids to support patient education and the role of nurses as patient advocates in facilitating shared decision making. The planned steps of project evaluation were to use formative evaluation to determine the effectiveness of the teaching tool, summative evaluation to determine whether the project objectives were met, and outcome evaluation to indicate whether the goal of the project was achieved.

Pilot testing the standardized teaching tool for 3 weeks was a type of formative evaluation. Feedback received from staff or patients about the teaching tool were used to improve the tool and made it more effective. Formative evaluation, a form of ongoing assessment, was used to improve or enhance current or new material (Hodges & Videto, 2013). The use of the teaching tool provided consistent education to all labor induction patients and increased active participation in decision making with the increased knowledge.

A summative evaluation was used to determine whether the project achieved the stated objectives and goals. The first objective of providing information on the impact of the labor induction-teaching tool on the patient's decisional capacity was met by analysis of patient interview responses and chart audits for documentation of education. Reviewing the patient interviews responses revealed the patient's perception of labor induction education and participation in decision making. Chart audits showed completion of patient education on labor induction. Analysis of the information from

patient interviews showed the achievement of the second objective, gaining an understanding of patient engagement and active decision making during labor and delivery on overall patient satisfaction. The patient responses demonstrated a correlation between active participation in decision making and overall satisfaction with the delivery experience. The third objective was met through the analysis of patient and staff responses and chart audits of education documentation. The analysis of the findings showed the effectiveness of the teaching tool to increase patient knowledge and helpfulness of the teaching tool in supporting patient education. The teaching tool was refined, as needed, to improve effectiveness and ease of use.

Lastly, an outcome evaluation was used to determine whether the overall goal of the project had been met. After the teaching tool was implemented, patient and staff responses validated an improvement to the quality of healthcare delivery by improving the effectiveness of labor induction education and patient participation in decision making. The postintervention survey was used to determine whether the labor-induction teaching tool had increased patient knowledge, patient engagement, and patient satisfaction with the labor and delivery experience.

Summary

Enhancing patient education through the use of teaching tools improved patients' understanding of the labor induction process and facilitated shared decision making. Piloting a teaching tool on labor inductions and reviewing the effects of enhanced education on patient's decision-making capacity and overall satisfaction improved the patient experience. This quality improvement project not only enriched labor induction

education and promoted patient engagement, it may lead to other improvements in patient education and care delivery. Other teaching tools can be developed in other areas such as preterm labor, gestational diabetes, and preeclampsia. The results of this quality improvement project may be used to facilitate the development of other teaching tools, support patient and family-centered care, and improve the delivery of quality care.

Section 4: Findings, Discussion, and Implications

Patient engagement and active participation in care during labor induction can increase patient safety and satisfaction (Barello et al., 2012). Providing adequate, consistent, evidence-based information that covers risks, benefits, and options can best support informed decisions and manage expectations. Previous studies demonstrated the value of shared decision making in the maternity environment and the need for sufficient education to support patient decision-making capacity (Barry & Edgman-Levitan, 2012, Carman et al., 2013, Coulter, 2012, Elwyn et al., 2012, Goldberg, 2009, Lee & Emmanuel, 2013, Tong et al., 2012). Patient satisfaction with the delivery experience is affected by the patient's expectations, relationship with healthcare staff, and inclusion in care decisions.

Summary of Findings

Patient Interview Responses

The labor-induction teaching tool was used with 37 patients who were admitted for labor induction during the 3-week pilot period. After the pilot, 25 postpartum patients who received labor induction education with the teaching tool were interviewed in their private room on the mother-baby unit before discharge. The information obtained from patient interviews following the pilot was analyzed using content analysis of the responses to the open-ended questions and then summarized (see Table 1).

Table 1

Patient Interview Responses

Thematic Category	Key Terms	Responses
Question 1: How do you feel about your birth experience?		
Satisfaction with Birth Experience	great, thankful	<p>“It was wonderful!”</p> <p>“I am so thankful to the the doctors and nurses.”</p> <p>“It was so much better than my last baby.”</p> <p>“I didn’t think I could handle the pain, but the nurses really helped me through it. Thank you!”</p> <p>“ I really liked having my mom and older daughter with me. I had an awesome team!”</p>
Question 2: How do you feel about the amount and quality of education you received about labor induction?		
Satisfaction with Induction education	learned, understand expectations, teaching	<p>“ I learned a lot. it really helped me understand what to expect.”</p> <p>I read about labor inductions on the Internet, but I liked going through the teaching with my nurse. I could ask questions and she explained everything very well.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
		“ It was a lot of information but I needed to know it.”
		“ The nurse did a better job explaining it than the OB.”
		“I didn’t know what I didn’t know. I didn’t understand that it could take so long. I thought I was going to get some medication, my labor would start, and I would have a baby the same day. I am so glad she told me it could take a few days. If I didn’t know that, I would feel like such a failure.”
		“I had a C-section because I was a possibility so I could understand when my OB came in to talk to me about it.”
		“It was important for my husband to hear the information too. He was scared about being induced, but it helped him to hear about how it works.”
		“I had an induction with my last baby, but I understand more now than I did before. It was very helpful.”

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 3: What do you think about the way the education was presented?		
Satisfaction with Education presentation	liked it, easy helped	<p data-bbox="1049 541 1417 680">“ I liked it. The nurse went through each page with me to make sure I could understand it.”</p> <p data-bbox="1049 726 1369 798">“ It was great! I liked the pictures.”</p> <p data-bbox="1049 835 1401 907">“It was so much better than watching a video.”</p> <p data-bbox="1049 945 1401 1083">“I liked the way it was presented. It was a lot of information, but it was important to have all of it.”</p> <p data-bbox="1049 1129 1401 1415">“It was good that my boyfriend was there to hear the information. It would have been hard for me to explain it to him. He didn’t know what induction meant or what to expect. Neither did I, really. It helped a lot.”</p>
Question 4: How do you feel about your level of participation in the decision making during labor and delivery?		
Satisfaction with level Of participation	comfortable to ask questions, talk about concerns	“ I felt comfortable asking questions. The doctors and nurses were really good in explaining and asking if I had questions.”

(Table 1 continued)

Thematic Category	Key Words	Responses
		<p>“ At first, I didn’t even know what to ask. I just came because the doctor told me I had to be induced, but I didn’t know exactly what that meant. When the nurse went through the teaching with me, I understood it better and I could ask questions.”</p>
		<p>“I didn’t really want a C-section, but I felt comfortable talking to the doctor about options. I think knowing the labor induction procedures and what is supposed to happen, I was more willing to accept the C-section because I had been induced for 2 days without any changes. My blood pressure was going up and I didn’t want to endanger the baby.”</p>
		<p>“ I felt that I could say what I felt. I didn’t want the foley bulb and explained to the doctor why I wanted to try another dose of the medication. I didn’t know that I had options until the nurse gave me the teaching.”</p>
		<p>“I didn’t even know what questions to ask or that I could ask about medical things. I thought that was the doctor’s responsibility. When the nurse told me that I can ask any questions at any time and that they wanted me to be part of the plan, I felt so important—my feelings actually mattered.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
		“My boyfriend even asked the midwife about some of the medications, instead of the bulb thing. I don’t think he would have spoken up before.”
Question 5: How could we have improved the labor induction education?		
Suggestions for Improvement	change, improve	“Nothing, it is already good.”
		“Have this available in the clinic so I could see this before I came to the hospital.”
		“Add a picture of the foley bulb. I haven’t heard of it before and the nurse had to get one to show me.”
Question 6: How could we have helped you more actively participate in decision making during labor and delivery?		
Patient engagement	permission, plan of care, asking patient	“ The nurses and the doctor gave me permission to ask questions and kept encouraging me. I am so glad that they let me know it was okay.”
		“Everyone did a good job in keeping me and my husband informed of the plan. And they asked me if I agreed with the plan, which I appreciated. I felt like I knew what to expect.”

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 7: How could we have improved your birth experience?"		
Patient satisfaction	great, change	<p data-bbox="1049 436 1432 611">"Nothing. Everyone was very good and kept me asking me what I thought. They let me know what was going on. I felt very involved."</p> <p data-bbox="1049 688 1432 793">"It was great!" I think the nurses and doctors were wonderful."</p> <p data-bbox="1049 835 1432 905">"I wouldn't change a thing. Everyone has been great."</p> <p data-bbox="1049 947 1432 1159">"I would have liked the teaching done in the clinic and reviewed when I got to the hospital. It would have given me more time to digest the information."</p>

The responses from the patients were very positive about the teaching tool, amount of education received, ability to participate in shared decision making, and overall satisfaction. All patients verbalized that they were satisfied with their birth experience and related positive comments about the staff nurses and OBs. When questioned about the labor induction education and format, all patients reported that the information was very helpful, easy to understand, and informative regarding what to expect. Many patients mentioned that they did not know that labor induction could take days and were glad to have that information upon admission. The explanation of the

procedure helped them to understand the need for induction and the process of induction. The patients stated that they felt comfortable asking questions and had more information after teaching to increase their ability to participate in shared decision making. Many patients shared that knowing the types of procedures for induction and pain management options enabled them to discuss these topics with their OB. Three patients who had C-sections following unsuccessful inductions verbalized their understanding of the need for a C-section and were grateful for being told that it was a possibility; they were better prepared to accept the C-section because they knew it could happen from the patient education. The only suggestion for improvement of the labor induction education was to have this information presented in the prenatal clinics and to add a picture of the foley bulb. Almost all of the interviewed patients had not heard of the foley bulb and thought a picture would help them understand it better. Most patients shared that they felt supported to ask questions and engage in their care; the nurses and OBs kept them well informed, and they understood the process better after the labor induction education. Two patients suggested writing the plan of care on the patient care board in the room to keep everyone informed of any changes. The interviewed patients communicated their satisfaction with the care and education received.

Nurse Survey Responses

The nurses voluntarily completed an online survey on the ease of use of the teaching tool, impact on workflow, and perception of patient engagement. A total of 44 responses (88% of nursing staff) were received (see Table 2). All of the nurses who responded felt that the teaching tool was helpful in providing patient education of labor

induction, with 5% reporting somewhat helpful, 20% reporting somewhat helpful to very helpful, and 75% reporting very helpful. All of the nurses who responded reported that the teaching tool was easy to use, with 2% reporting somewhat easy to use, 11% reporting between somewhat easy and very easy to use, and 86% reporting very easy to use.

Table 2

Nurse Survey Responses

Thematic Category	Key Words	Responses
Question 3: How did the teaching tool impact your workflow?		
Perception of Impact on workflow	easier, helpful, consistent teaching	“It made it easier to do patient teaching.”
		“It gave me a chance to work closely with my patient and her husband.”
		“It made patient teaching go a lot smoother. It was simple to go over everything at one time.”
		“Patients seem to like it. “
		“The information was simple and clear, it was easy for patients to understand and for me to go through it.”
		“It is good for the partner to hear the information, especially that it might take awhile.”

(Table 2 continued)

Thematic Category	Key Words	Responses
Question 4: What ideas do you have to improve the teaching tool?		
Improvement	improvement, change	<p data-bbox="1049 512 1425 800">“ A few patients asked about the foley bulb. Maybe having a picture of one could help. I know the OB will go over it in detail they use it, but it might help the patient understand it better if they could see it.”</p> <p data-bbox="1049 842 1425 1020">“Start a patient education binder for each room. Start with the labor induction teaching tool and we can add as we get more.”</p> <p data-bbox="1049 1062 1425 1129">“I like it as is. It is easy to use and the patients like it.”</p>
Question 5: How do you think the education impacted the patient’s ability to be involved with shared decision making and ability to ask questions?		
Patient empowerment, Engagement	asked questions, manage expectations	<p data-bbox="1049 1287 1425 1465">“ I think the patients knew what to expect with the teaching and they seemed to ask more appropriate questions.”</p> <p data-bbox="1049 1507 1425 1789">“I think the teaching has helped to make patients more comfortable in asking questions. They is less of ‘how long will it take’ to questions about how the baby is looking on the strip. I think the teaching has helped.”</p>

(Table 2 continued)

Thematic Category	Key Words	Responses
		<p>“I’ve been encouraging them to ask questions at anytime. We want to make it a great experience for them.”</p>
		<p>“The teaching has given the patients a better understanding of the process and what to expect. Because they know it might take awhile to have the baby, they are not as frustrated when it takes longer than a day. I know the teaching has made it easier for me as the nurse when I go over the medication or the strip with the patient. They seem more at ease with the terminology.”</p>
		<p>“ The partners are asking more questions now so I think they understand the process better.”</p>
		<p>“I overheard a mom and her husband talking and discussing the medications and what they were supposed to do. They asked very good questions and openly discussed their feelings with the OB.”</p>

(Table 2 continued)

Thematic Category	Key Words	Responses
Question 6: What other topics would you like to see in this teaching tool format?		
Future topics for patient teaching	other topics	“Preterm labor” “C-section care” “Breastfeeding” “Newborn care” “Postpartum depression”

When asked about the impact of using the teaching tool on their workflow, the majority of the nurses responded that the teaching tool made it easier to complete patient education. A few nurses reported that they needed to get used to using a teaching tool, but once it was incorporated into their workflow, it enhanced patient education. To improve the teaching tool, the nurses shared the patient’s suggestion to add a picture of the foley bulb to improve the explanation of that procedure. The nurses reported an improvement of patient participation in shared decision making after the education; patients were better informed, seemed more comfortable asking questions, and seemed to ask fewer questions about the length of time for labor induction. The nurses also provided additional topics for future teaching tools, including preterm labor, C-section prep and recovery, breastfeeding, newborn care, and postpartum depression.

Chart audits provided information about staff compliance with documenting patient education of labor induction. Documentation of education, specifically labor

induction education, demonstrated that the teaching tool was completed and was used consistently. Patient education is a care delivery standard at the project site, and all nurses are expected to document teaching as part of the plan of care. A total of 35 charts were audited for compliance of labor induction patient education documentation. Out of the 35 charts audited, 33 charts demonstrated documentation of the use of the labor induction teaching tool and patient verbalization of understanding, indicating a 94% compliance rate for patient education documentation.

Project Evaluation

The information obtained from patient interviews and staff surveys provided more information about the use of decision aids to support patient education and the role of nurses as patient advocates in facilitating shared decision making. Formative and summative evaluations, per the study component of the PDSA model, were conducted to evaluate the project.

Pilot testing of the standardized teaching tool for 3 weeks was a type of formative evaluation. Feedback received from staff or patients about the teaching tool was used to and make the teaching tool more effective. The patients and nurses provided suggestions to improve the teaching tool, including adding extra pictures and sharing it with the prenatal clinics for earlier patient education. The feedback was used to enhance the current teaching tool.

A summative evaluation was used to determine whether the project achieved the stated objectives and goals. The first objective of providing information on the impact of the labor-induction teaching tool on the patient's decision-making capacity was met as

demonstrated by the patient interview responses and chart audits for documentation of education. The patient responses revealed that the patients felt more empowered by the labor induction education to ask appropriate questions and receive the information needed to participate in shared decision making. Chart audits showed 94% compliance with documentation of patient education on labor induction, indicating that patients were provided with the labor induction education. The second objective, gaining an understanding of patient engagement and active decision making during labor and delivery on overall patient satisfaction, was achieved as demonstrated by the responses from patient interviews. Patients consistently reported an overall satisfaction with their birth experience, patient education, and ability to engage in their care decision making. The patient responses indicated an association between active participation in decision making and overall satisfaction with the delivery experience. The third objective, information about the use of a labor-induction teaching tool to enhance the delivery of patient education by labor and delivery nurses, was met through the analysis of patient and staff responses and chart audits of education documentation. The responses from both patients and nurses showed the effectiveness of the teaching tool in increasing patient knowledge and the helpfulness of the teaching tool in supporting patient education. The patients reported satisfaction with the teaching that was provided and the format of presentation. The nurses reported that the teaching tool enhanced patient education delivery and patients were better informed about the labor induction process. Patients' decision-making capacity was increased as patients were able to ask appropriate questions and verbalize the medications used for their induction.

Lastly, an outcome evaluation was used to determine whether the overall goal of the project was met. After the teaching tool was implemented, patient and staff responses confirmed an improvement in the quality of healthcare delivery by improving the effectiveness of labor induction education and patient participation in decision making. The results of the postintervention survey indicated the labor-induction teaching tool had increased patient knowledge, patient engagement, and patient satisfaction with the labor and delivery experience.

Discussion

The purpose of this quality improvement project was to increase patient participation in decision making through enhanced patient education with a teaching tool and increase patient satisfaction with the delivery experience. The need for this project was identified through patient comments made during nurse leadership-patient rounding. I discovered that many labor induction patients verbalized some frustration with the length of time it took from admission to delivery, lack of knowledge of the induction process, and feelings of powerlessness. Upon querying the staff and OB providers, I noted that there was variation in content of labor induction teaching. Review of current literature demonstrated the need for consistent education to support the patient's decisional capacity and the use of teaching tools to enhance patient education. The teaching tool content was derived from existing evidence-based information from the project site's education library and was reformatted into an easy to use tool. The teaching tool enabled the nurses to provide consistent information to all patients admitted for labor induction, eliminating individual variation, and ensuring that all labor induction patients

received basic education. The number of patient interviews exceeded the anticipated sampling; 25 patient interviews were completed instead of the anticipated 10 interviews. The higher number of patient interviews added to the robustness of the comments and was more representative of the patient population. The patient interviews revealed that the teaching tool increased decisional capacity so patients could be more engaged in their plan of care, helped patients better manage expectations, and increased their satisfaction with the delivery experience. Many patients expressed that they really did not know what to expect and the teaching supported their ability to ask questions. Every patient who was interviewed expressed only positive comments about the teaching tool. Patients suggested adding a picture of the foley bulb and to have this information in the prenatal clinic. As a result, the picture was added to improve the teaching tool and the updated teaching tool was shared with the supervisor of the OB clinics to be used for patients who were expected to have labor inductions. In addition, portions of the teaching tool were incorporated into the childbirth education classes offered at the project site so patients who attended these classes also shared in the information. Consistent education throughout pregnancy, from the OB clinics to childbirth education classes to admission to labor and delivery, made certain that patients received the needed education for informed choices, supported the patients to be engaged in their care, and increased patient satisfaction.

The nurses participated in a voluntary survey about the use of the teaching tool. A higher number of responses were received than anticipated: the response rate of 88% of the staff maintained that the comments and feedback were representative of the nurses.

The nurses expressed that the teaching tool enhanced their workflow and made it easier to teach patient about labor induction. They felt the teaching tool was easy to use and patients understood the content. The nurses reported that patients seemed to be less concerned with how long the induction took and could focus on coping with pain and the status of the baby. In addition, the nurses stated that patients asked more questions about the process and were able to ask the OB providers appropriate questions. Interestingly, the nurses made the same suggestion as the patients to have a picture of the foley bulb added to the tool. Because the nurses found the teaching tool to be helpful, they also considered other topics that may be beneficial for future use. The nurses suggested creating teaching tools for preterm labor, breastfeeding, newborn care, postpartum depression, and C-sections.

Chart audits were done to demonstrate compliance with documentation of education with the teaching tool and patient's understanding. Of the 35 charts audited, 94% were compliant in both areas. The nurses needed to add a comment to the patient education flowsheet that the teaching tool was used. As it was a new change, some staff had forgotten to do this step. Notes on the computers and verbal reminders helped to improve compliance from the first week to the subsequent weeks. Future improvements such as adding the teaching tool to the patient education flowsheet may improve documentation consistency.

The data from patient interviews, staff surveys, and chart audits showed that patient education, participation in active decision making, and overall satisfaction have improved with the implementation of the teaching tool on labor induction. The teaching

tool also enhanced the nurse' workflow and inspired the use of teaching tools on future perinatal topics that could further enhance the delivery of care.

Implications

The results of this quality improvement project have impacted care delivery and supported patient and family-centered care. Promoting patient safety through patient participation in shared decision making and focusing care around the individual needs of the patient and family are the hallmarks of modern healthcare (Barry & Edgman-Leviatan, 2012).

Impact on Practice and/or Action

Nursing practice focuses clinical care to promote patient safety, improve quality of care, and individualizes care based on assessment and patient input. Any evidence-based intervention that serves to enhance the quality of care delivery and encourages patient centeredness drives nursing practice to higher standards. The results of this quality improvement project demonstrated the use of a teaching tool to improve patient education, supported decision making, and increased patient engagement. One important implication to clinical practice is the effect of standardization and consistency in patient education. Every nurse develops an individual style of patient teaching. However, the content of patient teaching should be standardized to ensure that patients receive consistent information regardless of who delivers the teaching. With labor induction teaching prior to the implementation of the teaching tool, it was evident from patient and staff comments that the content of induction education was variable, resulting in inconsistent, sometimes inadequate information that impacted the patient's decisional

capacity. Standardization of patient education content makes certain that all patients receive the same information, regardless of the person doing the teaching, to enhance patient education and promote engagement. Not only will standardized contents of teaching topics improve patient education, it can also facilitate the nurses' workflow. Using a teaching tool or checklist will help the nurses cover the topic thoroughly and consistently, without relying on individual memory or teaching skill. The results of this quality improvement project support the need for standardization in patient education content and validate the need for a teaching tool to enhance patient education and improve efficiency in the nurses' workflow. As the project site is part of a larger healthcare network with hospitals in other regions, the impact of the teaching tool on clinical practice can be shared with the other hospitals; the impact on clinical practice can extend to nursing practice across the healthcare network.

Impact for Future Review and/or Questions

The success of the labor induction-teaching tool can lead to the development of additional teaching tools in other patient education topics. The nurses suggested the creation of teaching tools on preterm labor, breastfeeding, newborn care, postpartum depression, and C-section care. These topics were common topics of patient teaching or repeat themes of patient questions. Because the nurses and patients found the teaching tool on labor induction to be helpful in enhancing patient education and increased patient engagement and satisfaction, the nurses felt that the teaching tool format could improve patient teaching in other topics. The success of the teaching tool pilot has encouraged nurses to look for other areas of improvement in patient education. In addition, including

the nursing staff in the development of future teaching tools will help to promote evidence-based practice and quality improvement projects within the unit. This quality improvement project can also be used in the prenatal clinic setting. There is an abundance of patient teaching that occurs in the prenatal clinic. Implementing teaching tools, or sharing the same teaching tool, in the prenatal clinic could lead to further improvement in patient education and early promotion of patient participation in shared decision making. As patient education occurs in all aspects of patient care, the teaching tool could be spread to all areas of clinical practice to increase patient education, engagement, and satisfaction.

Impact on Social Change

The impact of this quality improvement project on social change is the promotion of patient and family-centered care. Patient participation in their treatment plan is the heart of modern healthcare (Romano, 2012). The patient is part of the healthcare team and their engagement increases compliance with the treatment plan, individualizes care, and increases patient safety (Barry & Edgman-Levitan, 2012). As the teaching tools increase the patient's decisional capacity and promote patient participation in decision making, the values of patient-centered care are further supported. The relationship between patient and other members of the healthcare team during pregnancy, labor, and delivery is very intimate and supporting the patient's preferences is a high priority for OB providers and nurses. The standard of excellent quality maternity care is patient and family-centered care that includes patient participation in decision making and respecting personal preferences.

Project Strengths and Limitations

Strengths

One of the strengths of this project was the support of the nursing and medical staff and leadership to improve the quality of care. When the patient comments were shared with the nurses and OB providers, they were enthusiastic and willing to correct the deficit. The nurses quickly learned to use the teaching tool and implemented it immediately. The OB providers and nursing leaders of the unit were also positive of the project and offered their assistance. The willingness of the staff to accept a change in their workflow made the implementation of the teaching tool an easy transition. Another strength was resources of the clinical site. Because the clinical site is part of a larger healthcare network, there is a plethora of evidence-based information on the organization's website. Being able to use these organizational resources to develop the teaching tool saved time in research and obtaining approval from the clinical site's patient education committee. The response rates of voluntary staff surveys and the higher than expected number of patient interviews were also strengths of this project. Because of the number of patient interviews, the responses received were more representative of the population of labor induction patients. Also, 88% of staff submitted a response to the anonymous online survey; the responses showed the feedback from the majority of the staff. Since the staff survey was voluntary and anonymous, there was no coercion or affect on their job by participating or by their responses; the feedback was assumed to be honest and genuine. Lastly, the timely responses from patient interviews were very encouraging to staff. The staff enjoyed hearing that the addition of the teaching tool made

a positive impact on the patient's birth experience. The patient comments reinforced the staff's use of the teaching tool and inspired the nurses to think of other topics for future teaching tools.

Limitations

One of the limitations of this project was my position as a nursing leader at the clinical site. Although staff participation in the survey was voluntary and anonymous, staff may have felt obligated to complete the survey. During patient interviews, I explained the project and purpose of the interview before obtaining consent for the interviews but wore the hospital badge that identified myself as a nursing director. The patients may have felt obligated to give a positive review because of my position in the hospital. After the first couple of patient interviews, I chose not wear a lab coat to the interview to eliminate the intimidation that may be associated with the lab coat and also disclosed that although I was a nursing director, the purpose of the interview was to obtain their feedback on the teaching tool and birth experience. Another limitation of the project was the short pilot period. The teaching tool was piloted for 3 weeks. A longer pilot period may elicit more constructive feedback and suggestions. Also, the teaching tool was piloted in only one hospital and the results are representative of the nurses and patients from only one hospital.

Recommendations for Remediation of Limitations

The staff surveys were completely anonymous and voluntary. However, in order to eliminate any feelings of obligation to complete the survey, a designated project coordinator, who was not a nursing leader, could work with the staff. Without any direct

leadership oversight of the labor and delivery nurses, the nurses would not feel intimidated or obligated to participate in the survey. Also, the designated project coordinator could complete the patient interviews. Because the project coordinator is not a nursing leader, the patients may not feel the need to give only positive comments. Using the PDSA model, the teaching tool will continue to be evaluated and refined from feedback from patients and staff. Although the pilot period was only 3 weeks due to time constraints for the project, the teaching tool will be reevaluated and updated on a routine basis through the PDSA cycle. In order to solicit the feedback that is representative of all women in the community who had an induction of labor, the pilot of the teaching tool can be extended to other hospitals with maternity services. It would involve more resources and time to pilot the teaching tool at other hospitals, as it would require approval from each hospital and training of staff at each hospital. An alternative would be to share the teaching tool with other hospitals and allow them to modify the tool to suit their organization. Although the teaching tool may be slightly different, the purpose of using the teaching tool would be the same and serve to increase patient knowledge, patient engagement, and patient satisfaction.

Analysis of Self

This quality improvement project has served to improve my knowledge and skills as a scholar, as a project developer, and as a nursing leader. Scholarship is about inquiry; questioning current practices, asking about the purpose or intent of programs, or validating evidence-based knowledge support of practice. It is looking at everything from a perspective of improvement and translating evidence-based knowledge to clinical

practice. I have improved my research and literature review skills. The solution to every problem begins with research of current evidence-based knowledge. Successful project development involves interdisciplinary collaboration, systems thinking, and inclusion of key stakeholders. Any new project is a change; change is often difficult and may be perceived negatively, even if the change is an improvement. Involving key stakeholders, those who will be directly impacted by the project, can mitigate some of the barriers to implementation as these key stakeholders can become project and change advocates. It is important to have these key stakeholders involved in the development of the goals, objectives, and interventions. A project cannot be developed and executed without teamwork and interdisciplinary collaboration. Members of the project team bring their unique perspective and talents. Group disagreements may arise during the project development, but focusing on the project goals, mutual respect, and ground rules can help overcome any group dynamic issues. Communication and presence are also important for a successful project implementation. Clear and frequent communication is vital to facilitating the project implementation. Physical presence on the unit that is impacted not only shows interest in the staff's well-being and feedback, but also shows leadership engagement. Leadership skills in change management, collaboration, communication, systems thinking, health policy, and population health are needed to lead evidence-based practice. Working with many different personalities and maintaining focus on the goals while keeping the project on track can be very challenging. Competing priorities and ego are some of the challenges of leaders. I have learned to listen to those who are doing the work or are receiving the care. Listening to patients and staff is key to scholarship,

project development, and leadership. Keeping the patient at the center of every decision, every project ensures that all that we do is to promote the health and safety of patients.

This quality improvement project started because of an identified need from patients. The patient voice is essential to looking for opportunities for improvement. Healthcare uses metrics, standards, and other measures to validate quality. These metrics define how hospitals are reimbursed, how they are rated on patient surveys, or how they compare to other organizations. These metrics are a hospital's report card. However, the patient's voice is the one measure of quality care that is often difficult to capture. Asking patients what they want and what they need and truly listening to their responses can indicate gaps in care that are not necessarily measured or defined by metrics. This project demonstrates how listening to our patients can show how we can improve the patient experience, through simple, small interventions such as a teaching tool. Future professional development could involve teaching healthcare professionals how to better listen to patients and to act on patient's needs. Healthcare professionals need to learn to make the patient the star player of the healthcare team. Patient and family-centered care insists upon patient input and participation in healthcare planning. Together with our patients, healthcare professionals can provide the education and expertise to improve the healthcare of our community.

Summary and Conclusions

Active participation in decision making involves a trusting relationship between patient and provider with a bi-directional flow of information that respects the patient's values, beliefs, and preferences. This quality improvement project promoted shared

decision making through consistent education for patients admitted for the induction of labor. The use of a teaching tool about the labor induction process empowered patients with the necessary knowledge to share in decision making and enhanced the patient-provider partnership resulting in improved patient safety and patient satisfaction.

By advocating for informed decisions, family-centered maternity services can support patient safety and engagement and become the standard for optimal maternity care.

Section 5: Scholarly Project

Dissemination of project results makes certain that new knowledge and best practices are shared within the nursing profession. Dissemination can be in the form of publication, conference presentations, or other forums where projects, findings, and implications for practice can be discussed with other healthcare professionals who are seeking to enhance clinical practice.

As a possible article submission to a perinatal or quality improvement journal, I used the Standards for Quality Improvement Reporting Excellence (SQUIRE) guideline used to develop the following manuscript (Oermann & Hays, 2011).

Promoting Shared Decision Making Through Patient Education of Labor Inductions

by

Lenora Low, MSN, RNC

Abstract

The induction of labor is medically indicated for many conditions in which delivering the baby outweighs the risk of continuing the pregnancy. Patients admitted for the induction of labor require adequate information to actively participate in decision making that affects their plan of care. The purpose of this quality improvement project was to improve the quality of healthcare delivery and promote patient engagement by providing consistent education using a teaching tool. The project question addressed the impact of a labor-induction teaching tool on improving patient education, participation, and overall satisfaction. The Plan-Do-Study-Act (PDSA) model was used to plan, implement, and evaluate the labor-induction teaching tool in a 9-room labor and delivery unit that averages approximately 1,500 births per year. The teaching tool content was obtained from existing patient education information from the organization's resource library. The nurses piloted the teaching tool for all patients admitted for the induction of labor for 3 weeks. Patient comments supported the use of the teaching tool to improve knowledge, increase participation in decision making, and enhance overall satisfaction. The nurses voluntarily completed an online survey that indicated the teaching tool was easy to use, positively impacted workflow, and supported informed choice. Patient charts were audited and showed a 94% compliance with documentation of education. The success of the teaching tool in improving patient education and decision-making capacity supports the development of other teaching tools, encourages patient and family-centered care, and improves the delivery of quality care.

Background

Achieving excellent patient outcomes is the result of a partnership between healthcare providers and healthcare consumers. Healthcare providers apply the most current evidence-based knowledge to practice, and healthcare consumers need to have an adequate level of information to be active participants in healthcare partnerships. Pregnancy and childbirth are excellent opportunities for women to partner with their obstetrician (OB) to create a birth plan for a normal delivery. However, there are situations that may arise that require some medical intervention, such as the induction of labor. The induction of labor is the use of medications or methods to promote uterine contractions prior to the onset of spontaneous labor (Wing, 2014). There are many medical indications for labor induction because the risk to the mother or fetus of continuing the pregnancy outweighs the risk of early delivery. Pregnant women who are admitted for induction of labor require adequate information about the indication for and process of induction, and options to actively engage in decisions regarding their delivery experience. Shared decision making includes providing enough information to the patient so that she and her partner can actively participate in developing the plan of care. The lack of adequate education can lead to unrealistic expectations and patient dissatisfaction with her care (George, 2013). In this paper, I present a quality improvement process to promote active patient participation in shared decision making through the use of a labor induction-teaching tool.

During my routine patient rounds after delivery, I noticed that many patients expressed frustration with the length of time from admission to delivery, lack of knowledge of the induction process, and disappointment because they did not have much input into their plan of care. These patients were happy that their baby was healthy and they had a safe delivery, but would have liked to have had a better understanding of the induction process so they could have known what to expect. Many of the patients that were interviewed mentioned that they didn't know what questions to ask; not knowing what to expect was a common source of stress during labor. Through informal discussion with nurses and physicians at the project site, I observed inconsistency in the amount and type of education provided to patients about labor induction, which varied from doctor to doctor and nurse to nurse. The lack of consistent patient education on the labor induction process lead to the patient's inability to be active participants in the decision making during labor and delivery, and contributed to overall frustration and dissatisfaction with their care experience.

Project Purpose

The purpose of the project was to improve the quality of healthcare for patients admitted for labor induction by providing consistent education using a labor-induction teaching tool with the intent of increasing patient knowledge about the labor-induction process, promoting patient participation in decision making, facilitating patient and family-centered care, and improving patient satisfaction with the delivery experience.

Project Objectives

1. This project will demonstrate the positive impact of a labor-induction teaching tool on patient knowledge, participation in decision making, and satisfaction.
2. This project will show the effect of education and engagement on patient satisfaction with the delivery experience.
3. This project will generate information about the use of a labor-induction teaching tool to enhance the delivery of patient education by labor and delivery nurses.

Methods

Theoretical Framework

The theoretical framework for this project was the Health Belief Model (HBM). The HBM is a model derived from behavioral science theories that centered on the attitudes and beliefs of people to direct behavior (McEwen & Wills, 2011). It was originally created by social psychologists in the 1950's to understand and increase the community's utilization of preventative health services (McEwen & Wills 2011). They theorized that people were afraid of diseases and that fear motivated them to engage in health-promoting behavior; the degree of fear of the disease directly affected the degree of motivation. The main components of the HBM are perceived susceptibility, perceived severity, perceived benefits, and perceived barriers (Hodges & Videto, 2011). The HBM is a supportive theoretical framework for pregnancy, labor induction education promotion, and patient engagement; a health baby is a great motivator as pregnant women are likely to engage in health-promoting behaviors if they believe that it will help them have a healthy baby. A pregnant woman is more likely to follow the suggestions of

her OB if there is any perceived harm to the baby or herself. Pregnant women need to be informed of risks and benefits of any treatment or medication during her pregnancy and delivery so she can make the right choice for herself in partnership with her OB. In summary, a person's belief about health conditions, benefits and risks of interventions, and self-efficacy can affect how they engage in health-promotional actions, such as active participation in decision making.

The HBM strongly supports education to help pregnant women make informed choices and influence healthy behavior. Women who came in for labor induction were provided appropriate information so they could be actively involved in their plan of care and made appropriate choices that respected her beliefs and values. The patients were able to ask questions and verbalized understanding of the severity of the disease process that necessitated the induction of labor. The patient education helped these patients weigh the susceptibility and severity of the treatment and possible consequences. Perceived benefits and barriers can also be addressed with adequate information; the patients were able to determine if the induction of labor was acceptable to them and supported their OB's decision to proceed with the labor induction. With appropriate education, the women were better able to make informed choices and manage expectations. The empowerment of induction education led to active participation in decision making and realistic expectations; the women were more satisfied with their delivery experience, even when labor induction was necessary. The HBM provided the theoretical structure to develop the care management of women with labor induction using education and patient advocacy to promote engagement and active participation in decision making.

Quality Improvement Methodology

A quality improvement approach was used to improve patient education about labor induction and facilitate patient participation in active decision making. The Plan-Do-Study-Act (PDSA) model was used to assess, plan, implement, and evaluate interventions. The PDSA model is a systematic, cyclical framework for continuous improvement of processes or programs (Kelly, 2011). Following the PDSA framework for quality improvement allowed for review of current practices and processes that limit patient participation in shared decision making, plan interventions to improve patient education and empower patients to be actively engaged with their care, and analyze the results of the interventions to determine if goals were met. The first step of the PDSA quality improvement model was planning which involved identifying an opportunity, analyzing the problem, and plan for modifications for improvement (Kelly, 2011). The problem was lack of patient participation in shared decision making and patient dissatisfaction with the delivery experience. Causes included inadequate education and information of the labor induction process which led to decreased decisional capacity, lack of teaching tools to support education, variability of staff confidence with providing teaching, lack of time to provide the information, and lack of accountability for providing patient education. The “do” component of the PDSA model included the pilot of a labor induction-teaching tool to provide a consistent format for patient education for all patients admitted for the induction of labor. For the “study” component of the PDSA model, the patients who received the education with the teaching tool were interviewed and the nurses voluntarily participated in a post-intervention survey. Also, the electronic

medical records were audited for documentation of the labor induction education to demonstrate compliance with providing patient education on the induction process. Any feedback from the patients and staff was used to improve the teaching tool and process, and contribute to the full implementation of the teaching tool, corresponding to the “act” of the improvement model.

Project Setting

The project site was a 9 room labor and delivery unit that averages approximately 1,500 births per year. The hospital is the regional medical center for a health maintenance organization that is part of a large national healthcare network. The labor and delivery unit was staffed with five to six registered nurses, a ward clerk, and one obstetrical technician per shift, depending on the unit census. There was an OB and CNM or medical resident present on the unit 24 hours a day, 7 days a week. The unit also included two operating rooms and a postanesthesia care unit for C-sections. There was a level III neonatal intensive care unit with either a neonatologist or neonatal nurse practitioner present at all times in the facility.

Sampling

All patients who were admitted for an induction of labor received labor induction education with the teaching tool after the nurses were trained. After delivery, 10 postpartum patients who had labor induction education with the teaching tool were interviewed. The convenience sample of 10 patients was based on 10% of the average birth census and average number of labor inductions per month for the previous year. The

staff survey was sent to all of the nursing staff with the goal of obtaining 25 nurse responses (50% of nursing staff).

Procedures

Anecdotal information obtained from routine patient and staff rounds provided the baseline and background information. The labor induction-teaching tool content was obtained from existing patient education within the organization's database. The labor and delivery nurses were trained on the use of the teaching tool and it was piloted for 3 weeks.

After the pilot, postpartum patients who received labor induction education with the teaching tool were interviewed in their private room on the mother-baby unit before discharge. The interviews included questions in Appendix A to explore patients' satisfaction with the labor induction education, ability to participate in decision making, and overall satisfaction with the birth experience. The patients were also asked for any suggestions to improve the education or to provide feedback on the teaching tool.

In addition, the nurses were asked to voluntarily complete a survey on the ease of use of the teaching tool, impact on workflow, and perception of patient engagement. The survey was administered via Survey Monkey for anonymity and ease of respondent submission.

The charts of patients who received the labor induction education with the teaching tool were audited for compliance of teaching documentation. After any patient education, the nurses were expected to document the completion of the education, assessment of patient readiness to learn, and patient understanding of the education topic.

During the study, documentation of patient education of labor induction showed that patients were provided with the necessary information to make informed choices.

Teaching Tool

The teaching tool consisted of general information about the labor induction process, medications or procedures that may be used, alternatives and options, and possible complications. The content was derived from labor induction education from the hospital's database that is used at other facilities within the organizational network. The teaching tool was used for any patient who was admitted for labor induction, regardless of the indication for induction, to provide consistent information about the labor induction process. Nurses used the teaching tool as a guide that included talking points, and was not used as a self-study module by patients.

Data Analysis

The information obtained from patient interviews following the pilot was analyzed using content analysis of the responses to the open-ended questions and then summarized. I expected that patient responses would determine whether the teaching tool on labor induction was successful in increasing the patient's ability to ask questions and become more active in decision making. The patient responses would also serve to improve the teaching tool, content, and presentation.

The quantitative data obtained from the staff surveys was summarized and qualitative data obtained from responses to open-ended questions were analyzed using content analysis and then summarized. I expected that the staff responses would provide insight into the use of teaching tools to supplement patient education, improve the nurse's

ability to provide effective, quality education, and enhance nurse's perception of the impact of education on patient's decision-making capacity and engagement. In addition, the staff surveys would provide any staff suggestions for improving the teaching tool and generating ideas for future teaching tool topics.

Chart audits provided information about staff compliance with documenting patient education of labor induction. Documentation of education, specifically labor induction education, demonstrated that the teaching was completed and consistent.

Project Evaluation

The planned steps of project evaluation were to use formative evaluation to determine the effectiveness of the teaching tool, summative evaluation to determine whether the project objectives were met, and outcome evaluation to indicate whether the goal of the project was achieved.

Pilot testing the standardized teaching tool for 3 weeks was a type of formative evaluation. Feedback received from staff or patients about the teaching tool were used to improve the tool and made it more effective. Formative evaluation, a form of ongoing assessment, was used to improve or enhance current or new material (Hodges & Videto, 2013). The use of the teaching tool provided consistent education to all labor induction patients and increased active participation in decision making with the increased knowledge.

A summative evaluation was used to determine whether the project achieved the stated objectives and goals. The first objective of providing information on the impact of the labor induction-teaching tool on the patient's decisional capacity was met by analysis

of patient interview responses and chart audits for documentation of education. Reviewing the patient interviews responses revealed the patient's perception of labor induction education and participation in decision making. Chart audits showed completion of patient education on labor induction. Analysis of the information from patient interviews showed the achievement of the second objective, gaining an understanding of patient engagement and active decision making during labor and delivery on overall patient satisfaction. The patient responses demonstrated a correlation between active participation in decision making and overall satisfaction with the delivery experience. The third objective was met through the analysis of patient and staff responses and chart audits of education documentation. The analysis of the findings showed the effectiveness of the teaching tool to increase patient knowledge and helpfulness of the teaching tool in supporting patient education. The teaching tool was refined, as needed, to improve effectiveness and ease of use.

Lastly, an outcome evaluation was used to determine whether the overall goal of the project had been met. After the teaching tool was implemented, patient and staff responses validated an improvement to the quality of healthcare delivery by improving the effectiveness of labor induction education and patient participation in decision making. The postintervention survey was used to determine whether the labor-induction teaching tool had increased patient knowledge, patient engagement, and patient satisfaction with the labor and delivery experience.

Results

Patient Interview Responses

The labor-induction teaching tool was used with 37 patients who were admitted for labor induction during the 3-week pilot period. After the pilot, 25 postpartum patients who received labor induction education with the teaching tool were interviewed in their private room on the mother-baby unit before discharge. The information obtained from patient interviews following the pilot was analyzed using content analysis of the responses to the open-ended questions and then summarized (see Table 1).

Table 1

Patient Interview Responses

Thematic Category	Key Terms	Responses
Question 1: How do you feel about your birth experience?		
Satisfaction with Birth Experience	great, thankful	<p>“It was wonderful!”</p> <p>“I am so thankful to the the doctors and nurses.”</p> <p>“It was so much better than my last baby.”</p> <p>“I didn’t think I could handle the pain, but the nurses really helped me through it. Thank you!”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 2: How do you feel about the amount and quality of education you received about labor induction?		
Satisfaction with Induction education	learned, understand expectations, teaching	<p data-bbox="1049 548 1406 653">“ I learned a lot. it really helped me understand what to expect.”</p> <p data-bbox="1049 695 1417 909">I read about labor inductions on the Internet, but I liked going through the teaching with my nurse. I could ask questions and she explained everything very well.”</p> <p data-bbox="1049 951 1398 1018">“ The nurse did a better job explaining it than the OB.”</p> <p data-bbox="1049 1060 1433 1459">“I didn’t know what I didn’t know. I didn’t understand that it could take so long. I thought I was going to get some medication, my labor would start, and I would have a baby the same day. I am so glad she told me it could take a few days. If I didn’t know that, I would feel like such a failure.”</p> <p data-bbox="1049 1501 1369 1606">“It was important for my husband to hear the information too. “</p> <p data-bbox="1049 1648 1409 1789">“I had an induction with my last baby, but I understand more now than I did before. It was very helpful.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 3: What do you think about the way the education was presented?		
Satisfaction with Education presentation	liked it, easy helped	<p data-bbox="1049 541 1419 680">“ I liked it. The nurse went through each page with me to make sure I could understand it.”</p> <p data-bbox="1049 726 1365 793">“ It was great! I liked the pictures.”</p> <p data-bbox="1049 835 1398 903">“It was so much better than watching a video.”</p> <p data-bbox="1049 945 1414 1234">“It was good that my boyfriend was there to hear the information. It would have been hard for me to explain it to him. He didn’t know what induction meant or what to expect. Neither did I, really. It helped a lot.”</p>
Question 4: How do you feel about your level of participation in the decision making during labor and delivery?		
Satisfaction with level Of participation	comfortable to ask questions, talk about concerns	<p data-bbox="1049 1390 1430 1566">“ I felt comfortable asking questions. The doctors and nurses were really good in explaining and asking if I had questions.”</p> <p data-bbox="1049 1608 1403 1814">“My boyfriend even asked the midwife about some of the medications, instead of the bulb thing. I don’t think he would have spoken up before.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
		<p>“ At first, I didn’t even know what to ask. I just came because the doctor told me I had to be induced, but I didn’t know exactly what that meant. When the nurse went through the teaching with me, I understood it better and I could ask questions.”</p>
		<p>“I didn’t really want a C-section, but I felt comfortable talking to the doctor about options. I think knowing the labor induction procedures and what is supposed to happen, I was more willing to accept the C-section because I had been induced for 2 days without any changes.”</p>
		<p>“ I felt that I could say what I felt. I didn’t want the foley bulb and explained to the doctor why I wanted to try another dose of the medication. I didn’t know that I had options until the nurse gave me the teaching.”</p>
		<p>“I didn’t even know what questions to ask or that I could ask about medical things. I thought that was the doctor’s responsibility. When the nurse told me that I can ask any questions at any time and that they wanted me to be part of the plan, I felt so important—my feelings actually mattered.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 5: How could we have improved the labor induction education?		
Suggestions for Improvement	change, improve	<p data-bbox="1049 541 1333 613">“Nothing, it is already good.”</p> <p data-bbox="1049 653 1422 758">“Have this available in the clinic so I could see this before I cam to the hospital.”</p> <p data-bbox="1049 798 1398 940">“Add a picture of the foley bulb. I haven’t heard of it before and the nurse had to get one to show me.”</p>
Question 6: How could we have helped you more actively participate in decision making during labor and delivery?		
Patient engagement	permission, plan of care, asking patient	<p data-bbox="1049 1096 1422 1306">“ The nurses and the doctor gave me permission to ask questions and kept encouraging me. I am so glad that they let me know it was okay.”</p> <p data-bbox="1049 1346 1422 1598">“Everyone did a good job in keeping me and my husband informed of the plan. And they asked me if I agreed with the plan, which I appreciated. I felt like I knew what to expect.”</p> <p data-bbox="1049 1638 1422 1816">“Nothing. Everyone was very good and kept me asking me what I thought. They let me know what was going on. I felt very involved.”</p>

(Table 1 continued)

Thematic Category	Key Words	Responses
Question 7: How could we have improved your birth experience?"		
Patient satisfaction	great, change	<p data-bbox="1049 541 1377 646">“It was great!” I think the nurses and doctors were wonderful.”</p> <p data-bbox="1049 688 1398 762">“I wouldn’t change a thing. Everyone has been great.”</p> <p data-bbox="1049 804 1427 1010">“I would have liked the teaching done in the clinic and reviewed when I got to the hospital. It would have given me more time to digest the information.”</p>

The responses from the patients were very positive about the teaching tool, amount of education received, ability to participate in shared decision making, and overall satisfaction. All patients verbalized that they were satisfied with their birth experience and related positive comments about the staff nurses and OBs. When questioned about the labor induction education and format, all patients reported that the information was very helpful, easy to understand, and informative regarding what to expect. Many patients mentioned that they did not know that labor induction could take days and were glad to have that information upon admission. The explanation of the procedure helped them to understand the need for induction and the process of induction. The patients stated that they felt comfortable asking questions and had more information

after teaching to increase their ability to participate in shared decision making. Many patients shared that knowing the types of procedures for induction and pain management options enabled them to discuss these topics with their OB. Three patients who had C-sections following unsuccessful inductions verbalized their understanding of the need for a C-section and were grateful for being told that it was a possibility; they were better prepared to accept the C-section because they knew it could happen from the patient education. The only suggestion for improvement of the labor induction education was to have this information presented in the prenatal clinics and to add a picture of the foley bulb. Almost all of the interviewed patients had not heard of the foley bulb and thought a picture would help them understand it better. Most patients shared that they felt supported to ask questions and engage in their care; the nurses and OBs kept them well informed, and they understood the process better after the labor induction education. Two patients suggested writing the plan of care on the patient care board in the room to keep everyone informed of any changes. The interviewed patients communicated their satisfaction with the care and education received.

Nurse Survey Responses

The nurses voluntarily completed an online survey on the ease of use of the teaching tool, impact on workflow, and perception of patient engagement. A total of 44 responses (88% of nursing staff) were received (see Table 2). All of the nurses who responded felt that the teaching tool was helpful in providing patient education of labor induction, with 5% reporting somewhat helpful, 20% reporting somewhat helpful to very helpful, and 75% reporting very helpful. All of the nurses who responded reported that

the teaching tool was easy to use, with 2% reporting somewhat easy to use, 11% reporting between somewhat easy and very easy to use, and 86% reporting very easy to use.

Table 2

Nurse Survey Responses

Thematic Category	Key Words	Responses
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Question 3: How did the teaching tool impact your workflow?

Perception of Impact on workflow	easier, helpful, consistent teaching	“It made it easier to do patient teaching.”
		“It gave me a chance to work closely with my patient and her husband.”
		“It made patient teaching go a lot smoother. It was simple to go over everything at one time.”
		“Patients seem to like it.
		“The information was simple and clear, it was easy for patients to understand and for me to go through it.”
		“It is good for the partner to hear the information, especially that it might take awhile.”

(Table 2 continued)

Thematic Category	Key Words	Responses
Question 4: What ideas do you have to improve the teaching tool?		
Improvement	improvement, change	<p data-bbox="1049 512 1425 800">“ A few patients asked about the foley bulb. Maybe having a picture of one could help. I know the OB will go over it in detail they use it, but it might help the patient understand it better if they could see it.”</p> <p data-bbox="1049 842 1425 1020">“Start a patient education binder for each room. Start with the labor induction teaching tool and we can add as we get more.”</p> <p data-bbox="1049 1062 1425 1129">“I like it as is. It is easy to use and the patients like it.”</p>
Question 5: How do you think the education impacted the patient’s ability to be involved with shared decision making and ability to ask questions?		
Patient empowerment, Engagement	asked questions, manage expectations	<p data-bbox="1049 1287 1425 1465">“ I think the patients knew what to expect with the teaching and they seemed to ask more appropriate questions.”</p> <p data-bbox="1049 1507 1425 1789">“I think the teaching has helped to make patients more comfortable in asking questions. There is less of ‘how long will it take’ to questions about how the baby is looking on the strip. I think the teaching has helped.”</p>

(Table 2 continued)

Thematic Category	Key Words	Responses
		<p>“I’ve been encouraging them to ask questions at anytime. We want to make it a great experience for them.”</p>
		<p>“The teaching has given the patients a better understanding of the process and what to expect. Because they know it might take awhile to have the baby, they are not as frustrated when it takes longer than a day. I know the teaching has made it easier for me as the nurse when I go over the medication or the strip with the patient. They seem more at ease with the terminology.”</p>
		<p>“ The partners are asking more questions now so I think they understand the process better.”</p>
		<p>“I overheard a mom and her husband talking and discussing the medications and what they were supposed to do. They asked very good questions and openly discussed their feelings with the OB.”</p>

(Table 2 continued)

Thematic Category	Key Words	Responses
Question 6: What other topics would you like to see in this teaching tool format?		
Future topics for patient teaching	other topics	“Preterm labor” “C-section care” “Breastfeeding” “Newborn care” “Postpartum depression”

When asked about the impact of using the teaching tool on their workflow, the majority of the nurses responded that the teaching tool made it easier to complete patient education. A few nurses reported that they needed to get used to using a teaching tool, but once it was incorporated into their workflow, it enhanced patient education. To improve the teaching tool, the nurses shared the patient’s suggestion to add a picture of the foley bulb to improve the explanation of that procedure. The nurses reported an improvement of patient participation in shared decision making after the education; patients were better informed, seemed more comfortable asking questions, and seemed to ask fewer questions about the length of time for labor induction. The nurses also provided additional topics for future teaching tools, including preterm labor, C-section prep and recovery, breastfeeding, newborn care, and postpartum depression.

Chart audits provided information about staff compliance with documenting patient education of labor induction. Documentation of education, specifically labor

induction education, demonstrated that the teaching tool was completed and was used consistently. Patient education is a care delivery standard at the project site, and all nurses are expected to document teaching as part of the plan of care. A total of 35 charts were audited for compliance of labor induction patient education documentation. Out of the 35 charts audited, 33 charts demonstrated documentation of the use of the labor induction teaching tool and patient verbalization of understanding, indicating a 94% compliance rate for patient education documentation.

Discussion

The purpose of this quality improvement project was to increase patient participation in decision making through enhanced patient education with a teaching tool and increase patient satisfaction with their delivery experience. The need for this project was identified through patient comments made during nurse leadership-patient rounding. Review of current literature demonstrated the need for consistent education to support the patient's decisional capacity and the use of teaching tools to enhance patient education. The teaching tool content was derived from existing evidence-based information and was reformatted into an easy to use tool. The teaching tool enabled the nurses to provide consistent information to all patients admitted for labor induction, eliminating individual variation, and ensuring that all labor induction patients received basic education. The number of patient interviews exceeded the anticipated sampling; 25 patient interviews were completed instead of the anticipated 10 interviews. The higher number of patient interviews added to the robustness of the comments and was more representative of the patient population. The patient interviews revealed that the teaching tool was helpful in

increasing decisional capacity so they could be more engaged in their plan of care, helped patients better manage expectations, and increased their satisfaction with their delivery experience. Patients suggested adding a picture of the foley bulb and to have this information in the prenatal clinic. As a result, the picture was added to improve the teaching tool and the updated teaching tool was shared with the supervisor of the OB clinics to be used for patients who were expected to have labor inductions. In addition, portions of the teaching tool were incorporated into the childbirth education classes offered at the clinical site so patients who attended these classes also shared in the information. Consistent education throughout the pregnancy, from the OB clinics to childbirth education classes to admission to labor and delivery, ensured that patients received the needed education for informed choices, supported the patients to be engaged in their care, and increased patient satisfaction.

The nurses participated in a voluntary survey about the use of the teaching tool. A higher number of responses were received than anticipated: the response rate of 88% of the staff supports that the comments and feedback are representative of the nurses. The nurses expressed that the teaching tool enhanced their workflow and made it easier to teach patient about labor induction. They felt the teaching tool was easy to use and patients understood the content. The nurses reported that patients seemed to be less concerned with how long the induction took and could focus on coping with pain, status of the baby, and understood the process better. In addition, the nurses stated that patients asked more questions about the process and were able to ask the OB providers appropriate questions. Interestingly, the nurses made the same suggestion as the patients

to have a picture of the foley bulb added to the tool. Because the nurses found the teaching tool to be helpful, they also considered other topics that may be used for future teaching tools. The nurses suggested creating teaching tools for preterm labor, breastfeeding, newborn care, and C-sections.

Chart audits were done to demonstrate compliance with documentation of education with the teaching tool and patient's understanding. Of the 35 charts audited, 94% were compliant in both areas. The nurses need to add a comment to the patient education flowsheet that the teaching tool was used. As it was a new change, some staff had forgotten to do this step. Notes on the computers and verbal reminders helped to improve compliance from the first week to the subsequent weeks. To increase compliance with documentation, adding the teaching tool to the patient education flowsheet may help with future documentation consistency.

The data from patient interviews, staff surveys, and chart audits showed that patient education, participation in active decision making, and overall satisfaction were improved with the implementation of the teaching tool on labor induction. The teaching tool also enhanced the nurse's workflow and inspired the use of teaching tools on future perinatal topics that could further enhance the delivery of care.

Assumptions and Limitations

This project is limited to one medical center, which is the only regional medical center for a large, national health maintenance organization. The patients are members of the health plan and can only receive care at this facility. The OBs and Certified Nurse Midwives (CNMs) only work at this medical center. The practice of labor induction

education refers to that which is practiced at this facility, and may not represent the practice of labor induction education at other facilities in the community. I also assumed that patients wanted information and desired to actively participate in decision making to some degree. Informed choice is every patient's right, and while not all patients exercise their right to actively participate in their care, it is assumed that there may be some labor induction patients who will want to share in decision making based on informed choice.

Another limitation of this project was my position as a nursing leader at the clinical site. Although staff participation in the survey was voluntary and anonymous, staff may have felt obligated to complete the survey. During patient interviews, I explained the project and purpose of the interview before obtaining consent for the interviews but wore the hospital badge that identified myself as a nursing director. The patients may have felt obligated to give a positive review because of my position in the hospital. After the first couple of patient interview, I chose not to wear a lab coat to the interview to eliminate the intimidation that may be associated with the lab coat and also disclosed that although I was a nursing director, the purpose of the interview was to obtain their feedback on the teaching tool and birth experience. Another limitation of the project was the short pilot period. The teaching tool was piloted for three weeks. A longer pilot period may elicit more constructive feedback and suggestions. Also, the teaching tool was piloted in only one hospital and the results are representative of the nurses and patients from only one hospital.

Recommendations for Remediation of Limitations

The staff surveys were completely anonymous and voluntary. In order to eliminate any feelings of obligation to complete the survey, a designated project coordinator, who was not a nursing leader, could work with the staff. Without any direct leadership oversight of the labor and delivery nurses, the nurses may not feel intimidated or obligated to participate in the survey. Also, the designated project coordinator could complete the patient interviews. Because the project coordinator is not a nursing leader, the patients may not feel the need to give only positive comments. Using the PDSA model, the teaching tool will continue to be evaluated and refined from feedback from patients and staff. Although the pilot period was only three weeks due to time constraints for the project, the teaching tool will be reevaluated and updated on a routine basis through the PDSA cycle. In order to solicit the feedback that is representative of all women in the community who had an induction of labor, the pilot of the teaching tool can be extended to other hospitals with maternity services. It would involve more resources and time to pilot the teaching tool at other hospitals, as it would require approval from each hospital and training of staff at each hospital. An alternative would be to share the teaching tool with other hospitals and allow them to modify the tool to suit their organization. Although the teaching tool may be slightly different, the purpose of using the teaching tool would be the same and serve to increase patient knowledge, patient engagement, and patient satisfaction.

Conclusion

Nursing practice focuses clinical care to promote patient safety, improve quality of care, and individualizes care based on assessment and patient input. Any evidence-based intervention that serves to enhance the quality of care delivery and encourages patient centeredness drives nursing practice to higher standards. This quality improvement project promoted shared decision making through consistent education for patients admitted for the induction of labor. The use of a teaching tool about the labor induction process empowered patients with the necessary knowledge to share in decision making and enhanced the patient-provider partnership resulting in improved patient safety and patient satisfaction. One important implication to clinical practice, as demonstrated by this project, is the effect of standardization and consistency in patient education. Standardization of patient education content makes certain that all patients receive the same information, regardless of the person doing the teaching, to enhance patient education and promote patient engagement. The success of the labor induction-teaching tool can lead to the development of additional teaching tools in other patient education topics. In addition, including the nursing staff in the development of future teaching tools will help to promote evidence-based practice and quality improvement projects within the unit. As patient education occurs in all aspects of patient care, the teaching tool could be spread to all areas of clinical practice to increase patient education, engagement, and satisfaction. The impact of this quality improvement project on social change is the promotion of patient and family-centered care. The patient is part of the healthcare team and their engagement increases compliance with the treatment plan,

individualizes care, and increases patient safety (Barry & Edgman-Levitan, 2012). By increasing patient knowledge and advocating for informed decisions, family-centered maternity services can support patient safety and engagement and become the standard for optimal maternity care.

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Appendices for Scholarly Product

Appendix A: Patient Questionnaire

1. How do you feel about your birth experience?
2. How do you feel about the amount and quality of education you received about labor induction?
3. What do you think about the way the education was presented?
4. How do you feel about your level of participation in the decision making during labor and delivery?
5. How could we have improved the labor induction education?
6. How could we have helped you more actively participate in decision making during labor and delivery?
7. How could we have improved your birth experience?

Appendix B: Questionnaire for Nurses

1. How helpful was the labor induction-teaching tool in providing patient education?

1	2	3	4	5
Not helpful at all		Somewhat helpful		Very helpful

2. How easy was the labor induction-teaching tool to use?

1	2	3	4	5
Difficult		Somewhat easy		Very easy

3. How did using the teaching tool impact your workflow?

4. What ideas do you have to improve the teaching tool?

5. How do you think the education impacted the patient's ability to be involved with shared decision making and ability to ask questions?

6. What other topics would you like to see in this teaching tool format?

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Appendix A: Patient Questionnaire

1. How do you feel about your birth experience?
2. How do you feel about the amount and quality of education you received about labor induction?
3. What do you think about the way the education was presented?
4. How do you feel about your level of participation in the decision making during labor and delivery?
5. How could we have improved the labor induction education?
6. How could we have helped you more actively participate in decision making during labor and delivery?
7. How could we have improved your birth experience?

Appendix B: Questionnaire for Nurses

1. How helpful was the labor induction-teaching tool in providing patient education?

1	2	3	4	5
Not helpful at all		Somewhat helpful		Very helpful

2. How easy was the labor induction-teaching tool to use?

1	2	3	4	5
Difficult		Somewhat easy		Very easy

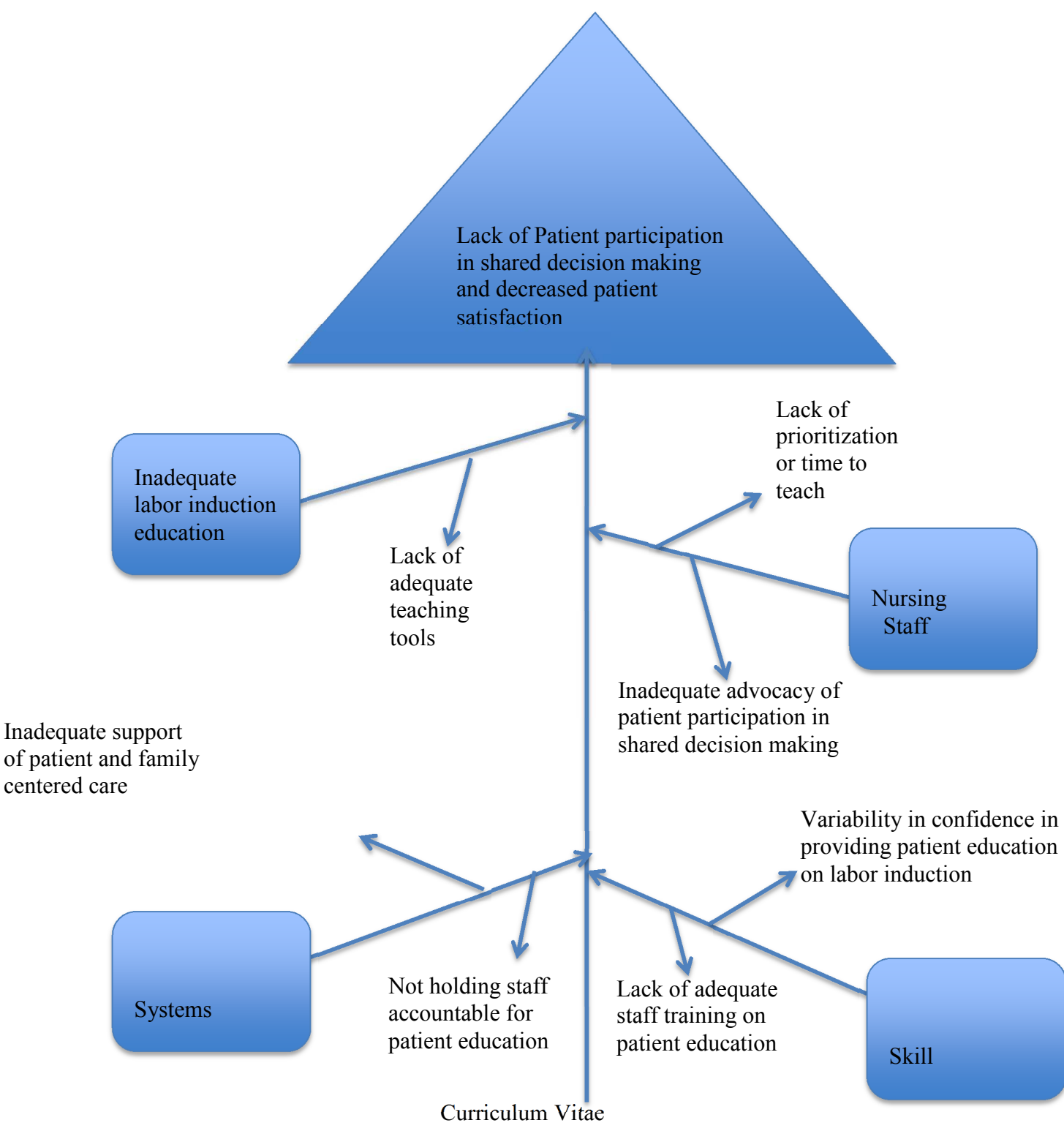
3. How did using the teaching tool impact your workflow?

4. What ideas do you have to improve the teaching tool?

5. How do you think the education impacted the patient's ability to be involved with shared decision making and ability to ask questions?

6. What other topics would you like to see in this teaching tool format?

Appendix C Fishbone Diagram of Project Problem



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lenoralow@hotmail.comlenora.w.low@kp.org**EDUCATION:**

DNP, Walden University, Minneapolis, MN, expected
graduation date: December 2015

MSN-Advanced Public Health Nursing, University of
Hawaii School of Nursing, Honolulu, Hawaii, December
2010

BSN, University of Hawaii School of Nursing, Honolulu,
Hawaii, December 1986

ADN, University of Hawaii School of Nursing, Honolulu,
Hawaii, May 1985

PROJECTS:

DNP Project:

A Quality Improvement Project: Promoting Shared Decision
Making through Patient Education of Labor Inductions

EXPERIENCE:

DIRECTOR OF SPECIALTY NURSING, Kaiser Permanente Moanalua Medical
Center (August 2013 to present)

- Provide administrative and financial responsibility for the planning, directing, and functioning of all activities of Specialty Nursing which include: Critical Care, Cardiac Cath Lab, Cardiac Testing, Telemetry, Respiratory Therapy, Labor and Delivery, Mother Baby, Pediatrics, and NICU

- Advise and direct activities of Nurse Manager/Supervisors/ Clinical Coordinators who are responsible for daily activities in each department
- Develop and implement operating and capital budget for each department
- Promote organizational and departmental goals, initiatives, and standards of practice for each department to promote safe patient outcomes
- Develop, oversee, and monitor departmental Quality Improvement activities
- Serve as resource and participate in related committees and task forces
- Evaluate staff performance
- Analyze, plan, and implement patient care delivery system
- Develop programs to educate and promote staff development
- Implement all hospital policies, TJC, DOH, OSHA, state and federal requirements and recommendations and assures departmental compliance
- Maintain current knowledge of changes in healthcare legislation, nursing practice, management techniques, technology, and community practice
- Represent the departments or hospital at meetings and community events
- Hire, train, supervise, counsel, discipline, and terminate assigned staff as appropriate

**INPATIENT PERINATAL CLINICAL COORDINATOR, Kaiser Permanente
Moanalua Medical Center
(May 10, 2011-August 2013)**

- Developed, planned, coordinated, implemented, and evaluated activities and processes designed to optimize care of perinatal inpatients
- Coordinated and conducted educational and professional development activities to meet the learning needs of staff and patients
- Developed, revised, and maintained policies and procedures for Labor and Delivery and Postpartum units
- Developed annual competencies for perinatal staff
- Participated in hospital simulation training for providers and staff

- Collaborated with healthcare teams in resource and quality management projects
- Supervised, coordinated, monitored and evaluated nursing standards of practice for perinatal inpatients
- Maintain responsibility for inpatient perinatal database
- Interviewed and recruited new staff
- Participate in various hospital committees including: patient safety, clinical competency, nurse practice, quality, regional learning council, patient and family centered care, medication safety, accreditation, lactation advisory, patient and family education, regional and local perinatal/perinatal safety, and staff development.
- Co-coordinator and instructor for NRP
- Collaborate with providers and ancillary staff for unit development projects
- Coordinate and conduct tours of perinatal units, assist with development of online OB tours and women's services website
- Management duties include: unit coverage in nurse manager's absence, assist with scheduling, leadership patient rounds, chart audits, daily supervision of staff

NURSING INSTRUCTOR, Kapiolani Community College School of Nursing
(August 2008 to July 2011)

- Planned, developed and implemented didactic curriculum with a focus on student outcomes for:
 - 1) RN students in Medical Surgical Nursing I and II, Fundamental Nursing, and Maternity Nursing
 - 2) LPN to RN Transition students in Maternity Nursing
 - 3) PN students in Maternity Nursing
 - 4) Surgical Technology students
- Course coordinator for Maternity nursing in ADN and PN programs
- Developed course content, lecture outlines, and course exams
- Prepared and presented lectures and facilitated classroom discussion to encourage and develop critical thinking skills
- Designed and facilitated interactive sessions to encourage team building and reinforce lecture content using practical clinical scenarios
- Directly supervised students as a clinical instructor in Medical Surgical Nursing I and II, Fundamentals, Maternity, Surgical Technology, in lab, long-term, and acute care settings

- Evaluated student clinical performance and participated in deceleration/re-admittance process
- Evaluated peers in lecture and clinical setting
- Actively participated in curriculum re-design committee
- Served as nursing department representative in Faculty Senate Admissions, Academic Standards, and Graduation Committee
- Participated in nursing department scholarship and interview committees

STAFF NURSE, Birth Center, Castle Medical Center (April 2008-May 2012)

- Stabilized and coordinated care of infants requiring oxygen therapy, IV therapy, antibiotics in a Level 2 Nursery
- Attended deliveries to assist in the transition and stabilization of newborns
- Provided nursing care to postpartum clients, including complex clients with postpartum hemorrhage, Magnesium Sulfate infusions, recovering Cesarean sections, etc.
- Relief charge nurse
- Assisted in the orientation of new staff
- Revised and developed departmental policies and procedures
- Provided in-services to staff
- NRP instructor for Birth Center staff and physicians

HOME HEALTH NURSE, Cradles N' Crayons (March 2008-March 2010)

- Provided respite care for medically fragile pediatric patients
- Maintained proficiency in care of patients with tracheostomies, ventilator dependent, gastrostomy tubes, etc.

NURSE CONSULTANT, Wellness Institute International, Honolulu (2002-2009)

- Nurse consultant for medical skin care clinic
- Conducted client interviews and thorough assessment of the skin to determine appropriate skin care regimen and treatment
- Trained in medical facials, microdermabrasions, vascutouch, ionto/sonophoresis, laser hair removal, laser skin resurfacing, chemical peels, assisted with administration of Botox, dermal fillers and other cosmeceutical procedures

OR/PACU NURSE, LEVEL IV, Shriner's Hospital for Children (February 2005 - March 2008)

- Coordinated the care of the patient pre-operatively, perioperatively, and post-operatively, specializing in pediatric orthopedics and plastic surgery
- Supervised surgical technologists
- Interim manager during nurse manager's absence
- Participated in continuous quality improvement projects within the hospital
- Conducted in services and training for staff
- Revised and developed departmental policies and procedures
- Instructed staff in Pediatric Advanced Life Support
- Oriented new staff
- Coordinated the daily operations in PACU

TRANSPORT NURSE, LEVEL IV, Kapiolani Critical Care Neonatal and Pediatric Transport Team, Kapi'olani Medical Center for Women and Children, Honolulu, (July 1996-November 2004)

- Coordinated and supervised the care and stabilization of critically ill neonates and pediatric patients for and during transport (ground, fixed wing, and Lear jet)
- Maintained proficiency in intubations, placement of central lines, needle aspirations, placement of chest tubes, arterial lines, insertion of intraosseous lines, and placement of peripheral percutaneous central lines
- Instructed staff in Neonatal Resuscitation and Pediatric Advanced Life Support
- Assisted in the orientation and supervision of new pediatric and family practice residents
- Conducted continuing education in services at various local hospitals and staff education
- Maintained proficiency in IV starts (IV therapy nurse for the nursing units)
- Oriented new staff members
- Attended all high risk deliveries to assist in the care and stabilization of newborns at birth

RESPITE HOME CARE NURSE, Castle Home Care, Castle Medical Center, Kailua, (September 2000- February 2006)

- Provided respite care for medically fragile infants and children
- Maintained proficiency in caring for patients with tracheotomies, ventilator dependent, gastrostomy tubes, etc.

CLINICAL COORDINATOR, Level 4 NICU, University Medical Center,
Lubbock, Texas (July 1993-June 1996)

- Permanent charge nurse of Level 4 NICU
- Participated in the annual evaluation of staff
- Responsible for monthly unit schedule
- Assumed weekend Management Call
- Developed new forms that better reflected the standards of care of the unit
- Contributed as guest instructor in videotaped outreach education offering
- Transport Nurse (NICU/PEDI transport team)
- ECMO specialist trained in Neonatal and pediatric ECMO

OR STAFF NURSE, Shriner's Hospital, Honolulu, (July 1991-June 1993)

- Delegated and coordinated all perioperative nursing care
- Functioned as the circulator or scrub nurse in the OR, specializing in pediatric orthopedics and plastic surgery cases
- Served as relief staff nurse in PACU

CHARGE NURSE, Newborn Nursery, Kapiolani Medical Center for Women and Children, Honolulu, (February 1989-July 1993)

- Assumed responsibility of the management of my shift which included the supervision of patients and personnel (approximately 14 staff/shift)
- Developed and implemented unit self- scheduling
- Assisted in the development of patient acuity system for the nursery
- Contributed as guest panel member for Dept. of Health's Hawaii Universal Hepatitis B Immunization Conference
- Originated and developed protocol for nursing care of drug exposed infants
- Contributed to the development of new infant security system

OFFICE/OR STAFF NURSE, Plastic Surgery Center of the Pacific, Honolulu,
(October 1989-June 1991)

STAFF NURSE, Newborn Nursery, Kapiolani Medical Center for Women and
Children, Honolulu, (January 1987-February 1989)

STAFF NURSE, Medical Surgical unit, Kaiser Moanalua Medical Center,
Honolulu, (September 1985-December 1986)

LICENSURES AND CERTIFICATIONS:

Licensed as RN in Hawaii: RN 28468
Certified Perinatal Nurse: 169370-17
Certified in Neonatal Resuscitation
Certified in Basic Life Support
Certified NRP Hospital Based Instructor

ASSOCIATIONS

American Nurses Association
National Educators Association
Hawaii Public Health Association
Association of Women's Health, Obstetric, and Neonatal Nurses
– Hawaii Section Elected Section Chair 2011 to present

REFERENCES:

References and further data upon request