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### Enhanced Breastfeeding Support Using Video Education to Improve Exclusive Breastfeeding Rates in a Baby-Friendly Acute Care Facility

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**Enhanced Breastfeeding Support Using Video Education to Improve Exclusive  
Breastfeeding Rates in a Baby-Friendly Acute Care Facility**

by

Carol A. Mayernik

A project submitted to the faculty of  
Gardner-Webb University Hunt School of Nursing  
in partial fulfillment of the requirements for the degree of  
Doctor of Nursing Practice

Boiling Springs, North Carolina

2021

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11/21/2021  
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### **Abstract**

Exclusive breastfeeding (EBF) provides health benefits and is recommended by professional health organizations including the American Academy of Pediatrics, The World Health Organization, and the Centers for Disease Control and Prevention. Healthcare facilities support families to achieve EBF by educating clinicians and patients about the benefits of exclusive breastfeeding, providing prenatal education and hospital support to patients, and by achieving Baby-Friendly Designation through the Baby-Friendly USA, as endorsed by the World Health Organization/UNICEF. Most pregnant patients desire to exclusively breastfeed yet multiple barriers exist to achieve this goal. Evidence supports the use of video learning as an effective way to achieve learning goals. Encouraging postpartum patients to view breastfeeding educational videos after delivery to provide an extra educational layer of support during the postpartum phase found the videos to be a great resource, a good refresher, and helpful to achieve EBF.

*Keywords:* exclusive breastfeeding, EBF, baby-friendly designation, video learning, breastfeeding support

### **Acknowledgements**

This project could never have been completed without the support and encouragement of my mentor and practice partner, Dr. Margaret Hunter, Ph.D., MSN. Her patience and guidance helped me maintain the energy required to continue during a pandemic and other challenges that occurred during the process. I will be forever grateful to Dr. Cindy Miller, Ph.D., RN, my project chair. Dr. Miller's expertise and eagle eye helped me stay focused and maintain the project's integrity. I am honored to have worked with such a gifted nurse educator. Her caring manner exemplifies the professional nurse. Many colleagues have supported me in this journey. I will never forget their support and encouragement. My deepest gratitude goes to my family. My husband Andrew and children Matthew, Alyson, and Emily have provided the space, time, patience, and love necessary to complete such a project. Their generosity is overwhelming. I could have never achieved my dream of completing a DNP project without their support. I am always thankful to my extended family as they have always been present to cheer me on and keep me motivated. As always, I thank God for giving me the gifts required to be a nurse and continue with my education. My passion for the care of women and newborns is the catalyst for all of my professional work. I am thankful to be any part of the birthing experience and pray this project positively impacts better health for this vulnerable population.

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## **Problem Recognition**

The World Health Organization (WHO) and the American Academy of Pediatrics (AAP) recommend exclusive breastfeeding (EBF) for the first 6 months of life, but this occurs in only one in four infants (World Health Organization, n.d.). While steady gains in breastfeeding initiation and duration have recently occurred in the United States, the percentage of mothers achieving this goal remains low (Hawkins et al., 2015).

Breastfeeding provides health, social, and economic benefits to both mother and child during the postpartum period. Though breastfeeding is a natural and biological process that all mammals possess, barriers often prevent newborns from initiating and maintaining exclusive breastfeeding. According to the Centers for Disease Control and Prevention (2020), most women receive education about breastfeeding benefits sometime during their pregnancy and desire to breastfeed, but 60% do not breastfeed as long as intended. Factors such as barriers with lactation, latching, nutrition, weight concerns, unsupportive work policies, cultural norms, lack of family support, and unsupportive hospital practices and policies can influence the initiation and duration of breastfeeding. Sadly, disparities exist, as evidenced by Black newborns breastfeeding at a much lower rate than Caucasian and Hispanic infants. In addition to missed health opportunities when breastfeeding does not occur, financial impacts exist when mothers and newborns do not receive the benefits of breastfeeding, affecting individuals and communities (Centers for Disease Control, 2020).

The United Nations Children's Fund (UNICEF) (2018) states only 43% of the world's infants under six months of age are exclusively breastfed for the recommended six months. UNICEF and the World Health Organization (WHO) formed a global



partnership focused on improving breastfeeding. They are galvanizing political commitment, advocating for policies and laws to protect breastfeeding, preventing infant formula companies from unethical market practices, and working with governments to develop and enforce policies that provide time, space, and support for women to breastfeed. One strategy acute care facilities utilize to improve EBF rates is achieving Baby-Friendly Designation. The American Academy of Pediatrics endorses the World Health Organization/UNICEF Baby-Friendly Hospital Initiative (BFHI) (Baby-Friendly USA, 2020). Hospitals that receive BFHI designation make special efforts to support breastfeeding initiation to promote, protect, and support mothers within the birthing facility and after discharge. The BFHI was established in 1991 using evidence-based guidelines. Baby-Friendly USA, Inc. (BFUSA) accredits facilities that meet specific criteria that demonstrate support for breastfeeding mothers. The Baby-Friendly Hospital Initiative supports exclusive breastfeeding. Five percent of babies born in the United States are born in facilities with Baby-Friendly Designation. To take part in the BFHI, facilities must endorse and follow *The Ten Steps to Successful Breastfeeding*, which are:

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
2. Train all healthcare staff in the skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within one hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants.
6. Give infants no food or drink other than breastmilk unless medically indicated.

7. Practice rooming-in and allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no pacifiers or artificial nipples to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center.

One objective of Healthy People 2020 includes increasing the rate of infants that ever breastfed to 81.9% and reducing the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life (Office of Disease Prevention and Health Promotion, 2020). In North Carolina, from 2009-2016, the percentage of infants who were ever breastfed, at least one feeding, rose from 69.1% to 82.5%. While this trend is an improvement and exceeds the Healthy People 2020 goal, there is a slight downward trend since 2015, which peaked at 84.9%. Maternal Infant and Child Health (MICH) goal #23 is to reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life to 14.2%. The current national average for this metric is 17.2%. Evidence supports that infants exclusively breastfed during the first 2 days of life have an improved chance of maintaining breastfeeding once discharged (Baby-Friendly USA, 2020). In North Carolina in 2018, the percent of breastfed infants who were supplemented with infant formula within 2 days of life was 15.6%, which was an improvement from 20.4% in 2009. North Carolina is doing better than the national average in this metric. The national EBF rate at 2 days of life in 2018 at Baby-Friendly designated facilities was 82.8% compared to North Carolina at 84.4%. North Carolina outperforms the national rate. One large baby-friendly designated facility in North

Carolina has an EBF rate before discharge of 64.4% for Caucasian newborns, compared to 37.7% for Black newborns. Although the facility is baby-friendly designated, the EBF rate does not meet the national or North Carolina rate. The disparity between Caucasians and Blacks is significant. The Centers for Disease Control and Prevention's Division of Nutrition, Physical Activity, and Obesity (DNPAO) (2020) states persistent racial gaps in breastfeeding behavior exist, and access to postpartum EBF support is an issue of equity and social justice (Perez-Escamilla & Sellen, 2016). A comprehensive multi-systems approach that includes lactation support, caregiver support, and community support is necessary to address social and professional breastfeeding barriers (Johnson et al., 2016).

Evidence exists that breast milk, commonly referred to as “liquid gold,” is the ideal food for infants’ health, growth, and development and has important implications for mothers' health. Breast milk is safe, always at the right temperature, requires no preparation, and benefits childhood health such as healthy brain development and decreased risk of obesity, respiratory disease, acute otitis media, sudden infant death syndrome (SIDS), gastrointestinal infection, necrotizing enterocolitis, asthma and type 1 diabetes (UNICEF, 2018). Health benefits to mothers that nurse their infants include a decreased risk of breast cancer, ovarian cancer, type 2 diabetes, and high blood pressure (Centers for Disease Control and Prevention (CDC), 2018).

Low breastfeeding rates have a financial impact on people and communities. Health issues related to low breastfeeding rates contribute to more than \$3 billion a year of medical costs for mothers and children in the United States. Premature maternal and child deaths in the United States may be attributed to suboptimal breastfeeding for more than 3,340 people (Bartick et al., 2017). In 2014, suboptimal breastfeeding costs in the

United States were \$3.0 billion for total medical costs, \$1.3 billion for non-medical costs, and \$14.2 billion for premature death costs. Investments in strategies to enable successful EBF could result in significant health improvements and cost savings. Advocates for women's and children's health could play an integral role in supporting families to achieve optimal breastfeeding (Bartick et al., 2017).

The decision to breastfeed is typically made early in the pregnancy, but exclusive breastfeeding the first 2 days of life can be challenging, as evidenced by low EBF rates. Supplementation with formula during the first days of life influences exclusive breastfeeding habits after hospital discharge (Office of Disease Prevention and Health Promotion, 2020). McDonald et al. (2012) found less than two-thirds of term newborns are exclusively breastfed at hospital discharge. Newborns exclusively breastfed at hospital discharge have a markedly lower risk of weaning by 6 months postpartum. Supporting mothers to breastfeed exclusively during the hospital stay sets the family up to continue breastfeeding after discharge and receive immediate and long-term health benefits, and financial benefits to individuals and communities.

### **Identified Need**

With 11 facilities that provide maternity services, a large healthcare system had an EBF rate goal of 52.9% from birth to discharge for 2020. All but one facility in the hospital system has a Baby-Friendly designation, and several are scheduled for re-designation in 2021. Some facilities exceed the system EBF goal of 52.9%, but several are underperforming in this metric. With the largest number of deliveries, one facility in the system had an average EBF rate of 47.1% in 2020, falling short of the 52.9% organizational goal, and is due for BFHI re-designation in 2021. The facility not only

delivers the most newborns in the system but was the first to achieve BFHI designation. Achieving BFHI designation the first time was a challenge. The facility required a massive culture shift to support EBF, as outlined by the BFHI. Current low EBF rates threaten the chance of re-designation, and low performance in this metric contributes to not meeting organizational and The Joint Commission (TJC) goals.

Organizational benchmarks were set according to TJC standards to improve EBF rates over time. Breastfeeding rates during newborn hospitalization are reported to TJC. The Joint Commission defines exclusive breastfeeding as newborns that were only fed breast milk from birth to discharge (The Joint Commission, 2018). Baby-Friendly designated facilities are expected to provide support to mothers that desire to breastfeed with the goal of EBF in the hospital from birth to discharge. Healthcare team members, including providers and nursing, are educated on the risks and benefits of EBF and how to support the mother and newborn through required online education, shadowing with lactation specialists, and hands-on practice through validation sessions. All systems are in place for the facility to meet EBF goals, yet the facility has been unable to achieve set goals and is at risk of losing the prestigious BFHI designation. More importantly, mothers that desire to breastfeed are leaving the facility without achieving their goal of exclusively breastfeeding and potentially risking achievement of the recommendation of EBF for at least 6 months.

Multifactorial barriers exist that negatively impact breastfeeding initiation and duration. Factors affecting EBF include mothers' concerns with insufficient milk supply and physical barriers such as sore, cracked, bleeding nipples; incision or perineal pain; not feeling well; sleepy baby; incorrect latch; and crying newborn (Rice, 2019). Concerns

with returning to work, workplace and societal factors, cultural and support barriers, and lack of education also contribute to low EBF rates. Lack of guidelines to evaluate breastfeeding education's effectiveness may be contributing to slow improvements in EBF rates. (Papautsky, 2019). Delivery room nurses provide the initial latch-on support to mothers, but sustained support through lactation consultation typically occurs hours, if not days, after delivery. Patients may or may not receive sufficient support and education from busy hospital staff once delivered. Prenatal education is valuable, but patients need continued education to succeed once the newborn is delivered. Effective breastfeeding education must consider patient goals, backgrounds, family, and peer support (Papautsky, 2019). Patients have various experiences, knowledge, and support that affect breastfeeding choices and successes. Women need breastfeeding education that is tailored to their individual needs. Approximately 90% of full-term women that deliver at the facility plan to breastfeed upon admission to the facility, but many women do not achieve success by discharge.

### **Problem Statement**

A Baby-Friendly designated facility does not meet the health system's birth to discharge EBF goal and is at risk of losing re-designation and contributing to individual and community loss of health and financial benefits related to EBF. Patients receive prenatal breastfeeding education and receive post-delivery support from nursing and lactation specialists but need another layer of post-delivery support to achieve EBF success.

## Literature Review

A comprehensive literature search was conducted surrounding breastfeeding, cultural differences in breastfeeding, Black women and breastfeeding, Baby-Friendly Hospital Initiative (BFHI), video-assisted teaching, EBF at discharge, and postpartum teaching. Databases searched included CINAHL Complete, MedlinePlus, Nursing & Allied Health Database, ProQuest Education Database, ProQuest Sociology Database, ProQuest Central, and PubMed. This literature review's selection criteria included peer-reviewed literature on the benefits of breastfeeding, barriers to exclusive breastfeeding, factors influencing exclusive breastfeeding, and evidence-based practice to improve breastfeeding rates. Key search terms included breastfeeding, breastfeeding, and Black women, Baby-Friendly Hospitals, breastfeeding disparities, exclusive breastfeeding, video learning, and postpartum education. Dates narrowed the search within the past ten years for the most current literature. Common themes discovered include: gaps exist between healthcare provider knowledge and clinical practice, cultural differences exist in breastfeeding habits, postpartum support is essential to initiate and sustain breastfeeding, social and community support is vital to mothers that desire to breastfeed, video-assisted learning increases knowledge, post-delivery breastfeeding support is essential and lacking, patients rely on the Internet for educational support over providers, short hospital stays and parental lack of confidence contribute to poor EBF success, and patients that deliver in facilities with BFHI designation may or may not have better EBF rates than those without BFHI designation.

Hawkins et al. (2015) performed a quasi-experimental study to evaluate the impact of the BFHI on breastfeeding initiation and duration overall and according to

maternal education. This study found that, on average, women delivered at BFHI designated facilities initiated breastfeeding (76% v. 73%) and exclusively breastfed longer (50% v. 42%) than those delivered at facilities without BFHI designation. This study also found that mothers with a high-school diploma or less were more likely to initiate breastfeeding when delivery occurred in a BFHI-accredited facility. This study was supportive of BFHI designation for birthing facilities.

Johnson et al. (2016) explored thoughts, attitudes, and experiences with healthcare professionals and sought best practices to support Black breastfeeding women. Thirty-eight pregnant or lactating Black women and a racially diverse group of health professionals participated in focus groups in a metro Detroit area. Thematic content analysis was conducted. Participants agreed with the health benefits of breastfeeding but felt healthcare providers were not supportive and sometimes discouraged breastfeeding. Mothers relied on peers and relatives for breastfeeding information because of healthcare provider distrust. The study identified practice changes required to increase EBF among Black mothers. Practice changes include: provide interventions that address social and cultural challenges, increase the number of International Board-Certified Lactation Consultants (IBCLC) of color, and provide professional lactation support void of unconscious bias that bridges the hospital, community, peers, and family support. Also, Spencer and Grassley (2013) found that providing opportunities for Black women to express breastfeeding experiences can provide the basis for new strategies that promote and support breastfeeding within the Black population.

Sayakhot and Carolan-Olah (2016) conducted a systematic review that concluded that pregnant women use the Internet as a source of information because of ease of access



and in response to particular situations. Mothers often follow up health provider visits with Internet searches for more information that may or may not be accurate. The *Wellness Network* provides breastfeeding education that is high-quality and up-to-date through annual clinical reviews that ensure accuracy and alignment with recommendations of the American Academy of Pediatrics and Baby-Friendly guidelines (The Wellness Network, n.d.).

Spencer et al. (2014) performed a sequential-consensual qualitative design (SCQD) study to explore Black women's experiences that considered themselves successful in breastfeeding. Participants in this study identified self-determination as a requirement for successful breastfeeding. Women with a strong commitment to breastfeeding before the infant's birth were better able to cope with breastfeeding challenges and lack of support. Proactively seeking out breastfeeding education and support was beneficial to women rather than relying on provider education and support, which could be inconsistent. Focus groups indicated the importance of normalizing breastfeeding by displaying images on billboards and educational material (Spencer et al., 2014). A longitudinal cohort study by Donath and Amir (2003) confirms maternal prenatal intention to breastfeed was a stronger predictor of EBF success related to initiation and duration.

Perez-Escamilla et al. (2016) performed a systematic review to examine the success of improving EBF rates utilizing the BFHI. Adherence to the BFHI *Ten Steps* positively impacted successful breastfeeding on short-term, medium-term, and longer-term outcomes. While all steps are essential, community support (step 10) and avoiding hospital supplementation (step 6), both implemented on the maternity ward, are critical to

immediate breastfeeding success. The *Ten Steps* serve as a quality assurance system at the facility and community level. There is a dose-response relationship between exposure to the number of steps and the likelihood of improved breastfeeding outcomes. The benefits of breastfeeding need to be taught early in pregnancy with continued support once breastfeeding establishment occurs (Lewallen & Street, 2010).

A descriptive study by Radzaminski and Callister (2015) suggests there are inconsistencies between healthcare providers' perceived support and behaviors, lack of knowledge, and lack of skill in assessing and managing breastfeeding couplets. A qualitative study by Whelan and Kearney (2015) demonstrated that training all healthcare professionals is necessary to support clinicians for breastfeeding success. These studies demonstrate the importance of clinician breastfeeding knowledge to improve EBF rates and support mothers.

Studies by Lopez et al. (2016) and Saldon and Singarayan (2020) support the use of video learning to improve knowledge and practice. Lopez et al. (2016) studied engineering students using an innovative blended-learning strategy that included video-assisted teaching (VAT). This quasi-experimental study found 98% of the students considered the VAT the most helpful resource for understanding lab lessons. Saldon and Slag (2020) studied the effectiveness of VAT on mothers' knowledge and practice related to post-discharge care of high-risk newborns. While this study was not specific to only breastfeeding, it found VAT enhanced knowledge and practice changes among mothers. This study was a quantitative, true experimental design with a sample size of 40, split in half between the study and control groups, using questionnaires to assess knowledge and a checklist to assess practice. The study concluded VAT was an effective method to

enhance mothers' knowledge of newborn care. Mothers discharged with high-risk infants demonstrated increased knowledge and practice change with VAT learning.

Patnode et al. (2016) provided a systematic review of 52 studies concluding breastfeeding support interventions are associated with improved rates of EBF. Individual interventions to support breastfeeding, such as professional lactation and peer support, have been shown to be effective, while system-level interventions such as BFHI have not. Congden (2016) explains that prenatal patient education focuses on childbirth and the perinatal period often gets little attention, leaving parents feeling unprepared. Inadequate education related to newborn behavior contributes to decreased maternal confidence and ineffective parental responsiveness to newborn cues for feeding, crying, and sleep resulting in lowered breastfeeding success rates. Short hospital stays leave limited time for parental education related to newborn infant care and inadequate addressing of maternal learning needs. Mothers lacking competence in normal newborn behavior also lack maternal confidence resulting in barriers to EBF. Inability to properly understand infant cues and states in the breastfed newborn can lead to unnecessary formula supplementation and early weaning (Congden, 2016).

This literature review supports the need to enhance patient education related to breastfeeding during the postpartum phase of care. Prenatal education provides the basis and education to support women in their decision to breastfeed their infant due to maternal and neonatal health benefits. However, once the child is born, mothers need continued support that is not always readily available due to caregivers' work demands and short hospital stays. Mothers may lean on Internet education over caregiver support due to a lack of trust and incongruent messages from professionals. Mothers have diverse

barriers to achieving exclusive breastfeeding; specifically, Black women desire breastfeeding normalization by seeing other Black women nursing their newborns. Video learning has shown to be effective in other areas of adult learning. The *Wellness Network* provides breastfeeding education that is high-quality and up-to-date through annual clinical reviews that ensure accuracy and alignment with recommendations of the American Academy of Pediatrics and Baby-Friendly guidelines (The Wellness Network, n.d.). The *Wellness Network* provides a library of diverse topics related to breastfeeding, including physical, social, and psychological issues using actual patients' storytelling and breastfeeding and newborn behavior demonstration by nurses and lactation specialists using live patients. It is available on-demand according to the patient's needs. The library is offered in English and Spanish and has closed captioning available. The literature supports the need for individualized breastfeeding support according to diverse EBF barriers. A video library with multiple topics can meet the patient's educational demands while adding another layer of support during the postpartum period. Another benefit to accessing the video library as breastfeeding education support is the accuracy of the information that aligns with professional recommendations.

## **Needs Assessment**

### **Target Population and Setting**

This project's target population is mothers of full-term, singleton, healthy newborns in one large acute care facility of a large healthcare organization. Full term is defined as greater than 37 weeks gestation. Healthy is defined as not requiring medical interventions, including glucose gel for hypoglycemia or admission to the neonatal intensive care nursery.

**PICOT Statement**

Do patients that plan to exclusively breastfeed before delivery who deliver their newborns in a Baby-Friendly designated acute care facility and view registered nurse suggested breastfeeding educational videos through *The Wellness Network* have higher EBF rates before discharge compared to patients who do not view suggested videos?

**Sponsors and Stakeholders**

Internal stakeholders in this project include the facility president; chief nursing officer; specialty leaders; director of nursing on the Women's unit; bedside clinicians including nursing staff, obstetric providers, pediatricians, neonatologists, and lactation specialists; corporate quality improvement analysts; patient education team; diversity and inclusion team; and patients that deliver at the facility. Facility leaders and quality improvement analysts are included because they are held accountable to outside stakeholders, including regulatory and standard bodies, such as Centers for Medicare & Medicaid Services, The Joint Commission, and Baby-Friendly USA. In addition, facility and service line leaders are held accountable to the corporate board. Bedside clinicians are included because they need to be educated and knowledgeable about practice changes and quality improvement initiatives. Patients are stakeholders because it affects them personally. The intervention is provided to the patients directly, affecting their health and breastfeeding support satisfaction.

External stakeholders include the county public health department, county commissioner, support groups, The Joint Commission, Centers for Medicare & Medicaid Services, Baby-Friendly USA, local community, social media communities, pediatricians, family practice providers, and state legislatures. Evidence supports

improving breastfeeding rates will improve the health of women and children. It is in the best interest of the county to improve healthcare outcomes. Improved healthcare outcomes will decrease healthcare costs as women and children improve health and require less medical resources.

### **Organizational Assessment**

A SWOT analysis was performed as part of the organizational assessment.

#### ***Strengths***

The corporate mission, vision, and values align with improving EBF rates. The health benefits of breastfeeding contribute to improving the community's health one person at a time, which is the organization's mission statement. Each newborn and mother who is successful with EBF can have better health, contributing individually and to the community. The organization's vision is to provide a remarkable experience in every dimension, every time. Supporting women in their desire to breastfeed is an example of providing remarkable care. Women should leave the facility feeling well supported in their decision to breastfeed. The organizational values of compassion, diversity and inclusion, personal excellence, teamwork, and courage are all required to meet the patient's individual needs while ensuring personal biases do not affect patient care. Teamwork, compassion, and personal excellence are required to support the complexities of achieving EBF success. Barriers to success must be identified, and a comprehensive plan must be made that includes teamwork from providers, the patient, nurses, and lactation specialists. The organization also has a substantial Diversity and Inclusion (D&I) team. This corporate team is several years old and looks at health equity across the organization. The team provides webinars about health care topics related to

diversity and inclusion. They also monitor outcome data. Since inequities in EBF have been discovered between Black and White women, resources have been put in place to support the Black population, such as funds to educate Black women to become lactation specialists through a partnership with Johnson C. Smith University, a historically Black university. The D&I team has a corporate influence on decreasing healthcare inequities. Other strengths include a robust electronic medical record (EMR) that provides detailed patient reports on specific data points, such as EBF incidences. The Patient Education and Clinical Education departments are very supportive of improving EBF rates. There is an organizational desire to improve EBF rates and maintain BFHI designation at the highest level of service line leadership. These rates get reported to the board and other key stakeholders. Other strengths include policies and procedures that support breastfeeding and lactation specialist availability 24/7.

### ***Weaknesses***

A history of slow culture change from nursing and neonatology providers is a weakness to improving EBF rates. Improving EBF rates involves incorporating evidence-based practice that includes rooming-in and couplet care. The facility has a large, staffed nursery, and the nursing team does not embrace rooming-in and couplet care. Neonatology providers are slow to change practice at this facility and feel formula intake does not disrupt the breastfeeding experience. They often provide formula as a quick fix to support newborn feeding instead of using patience as the mother and newborn work through barriers. The most significant barrier has been nursing leadership changes over the past two years and staffing retention issues. The facility has a high volume of deliveries. Low buy-in from staff and lack of oversight and accountability from

leadership is detrimental to improving EBF rates. In addition, there is a lack of visual images of breastfeeding women in the nursing unit. Evidence supports that breastfeeding normalization through images is essential to break down social barriers associated with breastfeeding.

### ***Opportunities***

Opportunities that may result from a successful program include the potential to improve EBF in other facilities within the organization, the potential to improve inpatient education statewide and nationwide due to organizational influence, potential to enhance breastfeeding education using technology that is easy for patients to use about desired topics, potential foundation financial support, and potential corporate marketing support. Improving EBF rates in this facility using video learning can be transferred to other nursing units within the organization. Success can also add to the body of literature for others outside the organization to improve education using video learning. Marketing messaging about high rates of EBF will benefit the corporate brand, which is good for business.

### ***Threats***

Potential threats to the project include potential blind spots within the organization. The Patient Education department is a highly motivated team but may be unaware of educational barriers related to breastfeeding support. Nursing and providers may not acknowledge organizational breastfeeding disparities and health inequities. Another threat is the time commitment to unit staff and the change of workflow required for nurses to determine which video-assisted teaching will best fit the patient's needs.



The neonatology group may also be a threat because of the fear of changing practice and supporting mothers to exclusively breastfeed when barriers exist.

### **Available Resources**

The organization is financially secure and offers a robust patient education department, clinical education department, and lactation specialist department. The patient education department funds and develops all patient education materials. The *Wellness Network* is already developed and available for patients but is underutilized in the maternity setting. The clinical education department supports bedside teams to access available technology when gaps occur, or new processes ensue. No additional office space, technology, supplies, or team members are required for this project.

### **Desired/Expected Outcomes**

The desired outcome is to see a positive trend in EBF rates for mothers of full-term, healthy newborns from birth to discharge in an acute care facility. Improving EBF rates will support and meet patient, organizational, and TJC goals and support BFHI's success in the re-designation process.

### **Team Selection**

The team consisted of a Project Leader to develop the project and manage the progress, a Project Chair to support the Project Leader in project development and completion, a Ph.D. prepared Practice Partner to mentor and remove barriers if necessary, and committee members, including a Director of Nursing, a Director of Clinical Education, and a Lactation Specialist Manager. The team was a multidisciplinary team of experts to facilitate project development and completion.

### **Cost/Benefit Analysis**

The costs of the project were minimal. The *Wellness Network* is already an available patient education resource. Supply costs, such as written directions to access the *Wellness Network* and survey questions, were the only material costs to the project. The actual cost of copy paper and toner was \$25. Education for the bedside team occurred at huddles and team meetings, so no decrease in productive time occurred. Saving benefits include decreasing the cost of formula. BFHI facilities pay for formula. The monthly cost of formula on the OB unit is approximately \$500/month. Decreasing formula use for patients desiring to exclusively breastfeed would be a department savings of approximately \$400/month. Other projected savings/benefits are unknown. Evidence supports improving EBF while in the hospital improves the likelihood of EBF for a longer duration. Long and short-term health benefits can lead to decreased emergency visits and hospital admissions, potentially decreasing healthcare costs to communities. The long-term health benefits to mother and infant, such as prevention of chronic conditions such as asthma, and diabetes, have the potential to save a substantial amount of healthcare costs over a lifetime.

### **Scope of Project**

The project's scope was to improve EBF rates from birth to discharge at a Baby-Friendly designated acute care facility for those patients planning to exclusively breastfeed, confirmed upon admission to Labor and Delivery, by providing breastfeeding patient education through video learning through *The Wellness Network*. *The Wellness Network* is a current, underutilized patient education resource provided through the patient television, hospital-provided tablets, or personal electronic devices. A registered

nurse visited patients on the postpartum unit on the first postpartum day and discussed barriers or concerns with breastfeeding. The registered nurse suggested a video topic related to the individual breastfeeding concern or condition. Patients were encouraged to watch the suggested video and as many videos as desired from the patient education library. Patients were provided an instructional document about accessing *The Wellness Network* breastfeeding library and an anonymous patient survey to be completed before discharge. The survey included demographic questions to ensure patients were within the project's scope and to obtain qualitative data about the experience. The survey had space with instructions to share comments about the breastfeeding support experience related to video learning. The patient was instructed to mark all viewed videos on the provided library list and mark yes/no for "helpfulness." The survey form was left in an envelope on the bedside table at discharge for the nursing staff to retrieve and place in a basket on the team leader's desk. The envelopes were collected daily by the project lead. No patient identifiers were on the forms to ensure anonymity. See Appendix A for video library and patient survey questions.

This project was confined to the patient's delivery time to discharge of full-term mothers of newborns without medical complications. Pre-intervention data were collected from retrospective electronic reports generated through the electronic medical record system. The report provided EBF data from patients who answered "yes" to "Planning to Breastfeed" upon admission to the hospital before delivery, which is a routine question as part of every hospital admission for birthing patients. The EBF report generated data for 1 month prior to the intervention to determine the percentage of newborns discharged without supplementation of formula, filtered per inclusion criteria.

The intervention was provided for 1 month with data collected over 30 days using the anonymous patient education survey. Post-intervention data were analyzed and compared to pre-intervention data to determine if the EBF rate increased with video viewing.

### **Theoretical Underpinning**

Achieving EBF success can be a challenge to the patient, the family, and the healthcare team. Literature supports the benefits of exclusive breastfeeding. Success involves knowledge, desire, support, understanding, and the will to succeed. The goal of Baby-Friendly designated facilities is to support mothers to successfully breastfeed in the hospital to improve the likelihood of long-term success after discharge (Baby-Friendly USA, 2020). Joanne Duffy's Quality Caring Model (2009) encompasses eight caring factors: mutual problem solving, attentive reassurance, human respect, encouraging manner, appreciation of unique meanings, a healing environment, affiliation needs, and basic human needs. Duffy (2009) states caring relationships support reverence for the person and the meanings associated with health and illness. Duffy believes the perception of another's way of being in the world is a fundamental element in caring relationships. While all eight of Duffy's Quality Caring Model elements can be applied to the successful implementation of EBF, three elements: mutual problem solving, appreciation of unique meanings, and encouraging manner are particularly pertinent to this project. Appendix B illustrates the conceptual-theoretical-empirical (CTE) diagram indicators for this project using Duffy's Quality Caring Model to improve EBF rates in a Baby-Friendly designated hospital that does not meet intended goals.

## **Mutual Problem Solving**

Mutual problem solving is an essential element to the success of exclusive breastfeeding. Duffy (2009) describes this element as the most significant caring factor and includes nursing behaviors that help patients and families understand how to confront, learn, and think about their health and condition. The mother's decision to breastfeed is an individual decision, but education and support are required to be successful (Lewallen & Street, 2010). In addition, Still et al. (2017) explain there is a lack of knowledge among health professionals related to the importance and definition of EBF. Duffy (2009) explains knowledge is vital for both the nurse and the patient to decide how to approach and solve problems in a manner acceptable to both. The diagram in Appendix B demonstrates that providing patient-specific breastfeeding education videos will improve EBF success. Through a nurse and patient discussion, the nurse recommends a topic specific to the patient's needs such as cultural issues, difficult latch, breastfeeding while working, social support, and others, which provides educational information to meet the individual's needs or interests. Education also provides knowledge about the importance of sustaining EBF before discharge, even for those mothers that plan to introduce formula when returning to work. The educational videos assist in mutual problem solving by providing education to patients through storytelling. The videos incorporate patient storytelling, using a diverse population, which helps the individual identify with others like them who provide answers to the patient's mutual problems. The video identifies the problem and provides information about the importance of EBF and how to succeed. Increasing knowledge will increase

understanding, supporting mutual problem solving between the patient and the clinical team.

### **Appreciation of Unique Meanings**

Duffy (2009) explains appreciation of unique meanings as the nurse is aware of a patient's context or worldview, including knowing what is important to the patient, such as unique sociocultural connections associated with their experiences. Nurses that use this caring approach often help patients feel understood and capable. Providing a choice of multiple breastfeeding topics allows the patient to decide which one(s) will support each patient's unique needs. Breastfeeding barriers are unique to each patient; providing multiple topics provides the patient with a choice according to her needs. Storytelling in the videos by a diverse group of mothers that have successfully breastfed will deepen the understanding of the benefits of EBF and the barriers to success that may exist. Patients will feel supported when they know that clinicians appreciate their unique worldview and experience related to breastfeeding by providing various topics unique to their concerns.

### **Encouraging Manner**

Duffy (2009) believes the element of encouraging manner is accomplished when patients feel the nurse supports their beliefs, encourages questions, helps them understand the issues, encourages them to pursue their goals, and helps them deal with suffering. An encouraging approach suggests enthusiasm, belief in the system, and empowerment, which are necessary for many mothers to achieve successful EBF. The diagram in Appendix B demonstrates that when clinicians care encouragingly, through suggesting video education that provides information and an additional layer of support to overcome EBF barriers, the EBF rates will increase. Lactation specialists and prenatal education

already provide encouragement to succeed. Postpartum video learning is another layer of support to encourage success. Johnson et al. (2016) explain the necessity of community and peer support to address breastfeeding barriers. Caring through an encouraging manner can be achieved by using patient-specific video learning resources to ensure mothers have the breastfeeding support and education needed to achieve EBF.

The theoretical underpinning of this project using Duffy's Quality Caring Model (2009), using the elements of mutual problem solving, appreciation of unique meanings, and encouraging manner, is ideal for achieving improvements in EBF rates and potentially decreasing disparities. Caring through these elements provides the education and support required to achieve success in such a complex issue. Breastfeeding is a natural process but carries social, emotional, and physical barriers that may only be removed through the care and support nurses provide.

### **Project Goals**

This project aimed to increase EBF rates before discharge for patients planning to exclusively breastfeed by providing evidence-based and up-to-date breastfeeding education via video learning through *The Wellness Network* as an extra layer of breastfeeding education and support during hospital admission.

### **Objectives**

#### **Process Objectives**

- Pre-intervention data collection will be completed within 15 days
- Develop and disseminate to the postpartum unit a document listing all accessible breastfeeding educational videos available on the *Wellness Network* with directions on how to access the video library.

- The topics will have a place to reflect the video viewed by the patient.
- A patient survey will be developed and attached to the breastfeeding video list.
- As documented upon admission, all postpartum patients who plan to breastfeed will receive the video document and survey upon admission to the postpartum unit.
- A designated RN on the unit will ensure each patient within the project's scope has the document and instructions for use.
- Patient written consent to participate will be obtained by RN, ensuring the document is in the room.
- Intervention will be implemented for 30 days
- Post-intervention data collection will be completed within 15 days
- Pre/post-intervention data comparison will be completed within 15 days

### **Outcome Objectives**

Patients admitted to the hospital planning to exclusively breastfeed who deliver a full-term newborn that requires no medical interventions and receive breastfeeding education via video learning will be successful at exclusively breastfeeding from birth to discharge measured by patient surveys and video library form completion, by viewing at least one patient-specific registered nurse recommended video, resulting in individual successful EBF that will improve facility EBF rates over a 30 day period.

### **Mission Statement**

The aim of this project was to enhance breastfeeding education after birth and before hospital discharge to increase EBF rates for the health of women and children and to meet facility goals.



## **Planning for Evaluation**

A Plan-Do-Study-Act (PDSA) tool was utilized to plan and document this project's progress. Improving the exclusive breastfeeding rates in one facility of a large healthcare organization by providing breastfeeding education through video learning will provide an outline for future use in other facilities within the organization. A PDSA model is often utilized in healthcare settings that do rapid cycle improvement processes that consist of daily management and the need for continuous development or improvements (Zaccagnini & Pechacek, 2021, p.382). The model for improvement includes increasing EBF rates at a Baby-Friendly birthing facility from birth to discharge to meet organizational and TJC goals. The measure of improvement includes monitoring the facility's EBF rates. The change to the current practice that will predictably increase EBF rates will be adding to the current postpartum breastfeeding support; a registered nurse suggested learning video from *The Wellness Network* specific to the patient's concerns or condition.

### **Plan**

The current process to support EBF at the Baby-Friendly birthing facility is for all clinicians practicing on the obstetrics unit, including nurses and providers, to take a course that includes information on the benefits of breastfeeding and learn solutions to achieve a proper latch and adequate breast milk production maintenance. Also included in the current plan is providing a handout that includes contact information for breastfeeding support after discharge. Pregnant patients are also encouraged to attend prenatal breastfeeding classes provided by the healthcare organization. Lactation Specialists and nursing support are also offered during the postpartum period. The plan of

change was for registered nurses to discuss concerns or issues related to breastfeeding and suggest a topic for breastfeeding education through video learning from *The Wellness Network* video library. Pre-interventional data were collected and analyzed using retrospective data pulled from electronic medical records for the month before the intervention occurred. The intervention occurred for 1 month, and post-interventional data were collected from patient surveys. EBF rates for patients meeting the inclusion criteria were compared. In addition, qualitative data from patient surveys were analyzed for future use.

### **Do**

A document was provided to postpartum patients that meet inclusion criteria with directions on how to access *The Wellness Network* library and a list of all breastfeeding education topics in the video library. A patient survey was also included in the document to obtain patient feedback. A registered nurse suggested a patient-specific topic to view and informed the patient she can view any other topics of interest if desired. Problems and unexpected findings during the interventional rollout, data collection, or analysis were documented.

### **Study**

The pre and post-interventional data were analyzed to determine if the intervention (change) resulted in the expected improvement in EBF from birth to discharge for patients planning to exclusively breastfeed at the birthing facility.

## **Act**

The effects of the intervention were studied and modifications were suggested. The PDSA cycle may be repeated. Expanding the changes to other facilities within the organization will be considered.

## **Implementation**

Project implementation occurred on a 32-bed postpartum unit of a Baby-Friendly acute care facility, staffed by registered nurses and certified nursing assistants. Certified lactation specialists are on the unit 24 hours a day and consult with patients at least once per day. Prior to implementation, site approval for the study was granted by facility leadership, and staff education occurred during staff meetings and huddles. Project implementation occurred over a calendar month. Subject visits mainly occurred during the hours of 4:00 PM-7:00 PM, Sunday-Saturday. Timing of visits was essential to the project's success because the facility provides daily "quiet time" from 2:00 PM-4:00 PM to allow for rest and family bonding. In addition, the morning hours are hectic on the nursing unit, with provider rounding for both the patient and the newborn, and completion of the birth certificate, newborn hearing screens, morning care, and meals.

The project implementation included obtaining a list of patients planning to breastfeed from the postpartum "grease board," which provides dates, times, and the newborn feeding intent. The "grease board" is generated by the electronic medical record. The project lead visited patients planning to breastfeed, asked for permission to enter the room, and explained the purpose of the visit. Patients were informed that patient education via evidence-based videos was available on-demand, and a study was being conducted to determine the effectiveness of video learning for breastfeeding support.

Information about how to access the video library was provided, and the procedure for the project was explained. Once the purpose and procedure of the project were explained, a written consent form was provided and signed. The patient discussed the breastfeeding experience, and concerns or barriers to exclusive breastfeeding were identified. The patient was provided with a resource form with written directions of everything already explained, a document with the video library titles, and a survey to be completed for anonymous data collection. A video from the video library was chosen and recommended according to the concerns discussed. See Appendix A for the video library document and patient survey. After viewing the recommended video, the patient was instructed to fill out the survey and place the completed survey in a provided envelope. The front of the envelope contained instructions to return the envelope to the team lead stationed in the nursery. No patient identifiers were present on the envelope or the patient survey. The envelopes were placed in a basket at the team lead desk and collected by the project lead daily. Once collected and secured by the project lead, the forms were secured in a locked office.

### **Threats and Barriers**

Threats to the project included predictable and unpredictable events. Predictable threats included a busy nursing unit and the potential for surveys not being collected as planned during discharge. High turn-over rates contributed to difficulty ensuring all team members were adequately educated on the project implementation. Unforeseeable threats to project implementation included the effects of the COVID-19 pandemic. The nursing unit was highly stressed with high patient volumes and inexperienced or unfamiliar nurses. Staffing was short due to absences related to vaccine mandates, nurses leaving for

higher-paying travel assignments, and COVID-19 positive test results of staff members. Data collection during the first 2 weeks of implementation returned low numbers of patient survey responses. The nursing team stated they were not aware of the project and did not collect the envelopes containing patient surveys. Nurses were re-educated on the project, and the team leads were provided a list of room numbers to assist in survey collection and counteract barriers.

Other unexpected barriers were relocating patients to other units due to the high census and the occasional inability to visit patients at the planned optimal time for consent. Project implementation was to occur on the postpartum unit, where team member education was provided, and facility permission was granted. Patients bedded on the “overflow” unit were not included in the implementation, which decreased the sample size. Another unexpected barrier was that some patients were not able to sign the written consent. Many times patients’ hands were full with actively breastfeeding the infant or eating a meal. In these instances, patients were informed that completing a patient survey also provides consent to participate in the study if they could not sign the written consent.

### **Monitoring of Implementation**

Monitoring of the intervention was a challenge due to unexpected schedule changes a week before project implementation resulting from the pandemic. The plan was for the project lead to have a presence on the unit during implementation every day to keep enthusiasm high and ensure goals and objectives were met. The pandemic required the project lead to adjust the work schedule for 4-5 weeks during implementation. The schedule change decreased the amount of time planned to consent all patients meeting inclusion criteria, which decreased the sample size and the ability to

fully monitor the collection of completed surveys. To counteract the challenges, a focus on building relationships with the nursing team encouraged support for the project and successful implementation. The final 2 weeks of the project implementation were more successful, as evidenced by increased survey responses.

### **Project Closure**

Project closure occurred on the last day of the month. All returned surveys and consents were locked and secured in the project lead's office. The facility nursing staff and leadership were informed of the completion of the intervention and were thanked for being open to allowing the intervention to occur on their unit. The staff was informed that the data would be presented to them and the organizational leadership upon data analysis and project completion. A positive result would support organizational change related to incorporating video learning to enhance breastfeeding education and support to improve exclusive breastfeeding rates before discharge in the facility.

### **Interpretation of Data**

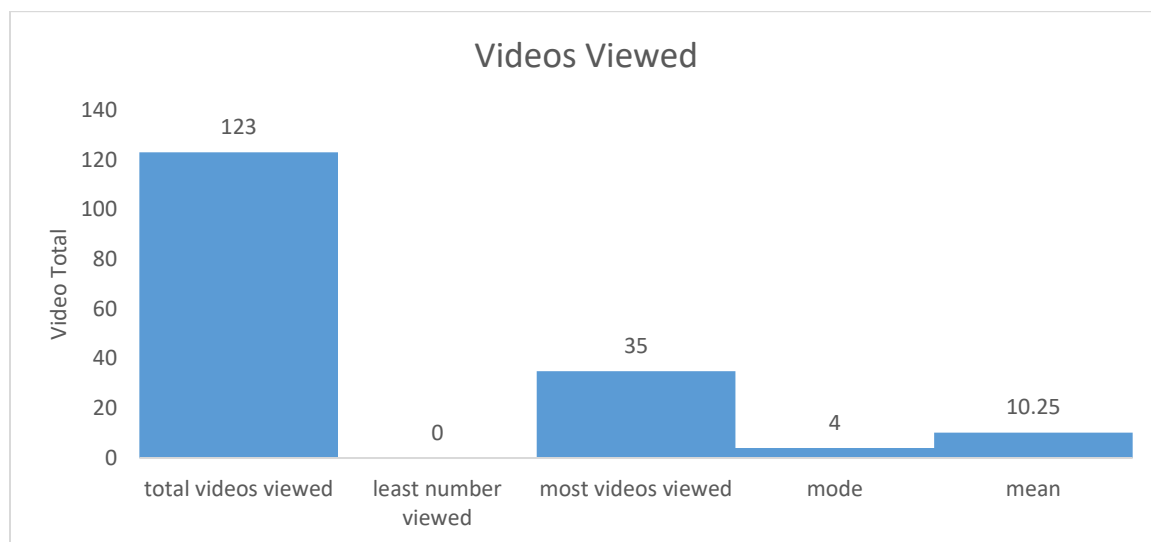
Survey results provided a small sample size due to multifactorial reasons. Over 110 patients were approached, and 26 written consents were obtained, but only 13 completed surveys were received, with 12 meeting inclusion criteria. The convenience sample included five patients breastfeeding for the first time and seven who had breastfed prior newborns. The small survey response was surprising because all but four patients stated they would participate and view the breastfeeding videos. Those that declined participation stated they had already breastfed multiple children and were not interested in further patient education related to the subject. The small sample size did not provide

enough data for statistical analysis of relationships between breastfeeding video support and EBF rates. A descriptive analysis of the data was performed.

### **Quantitative Data**

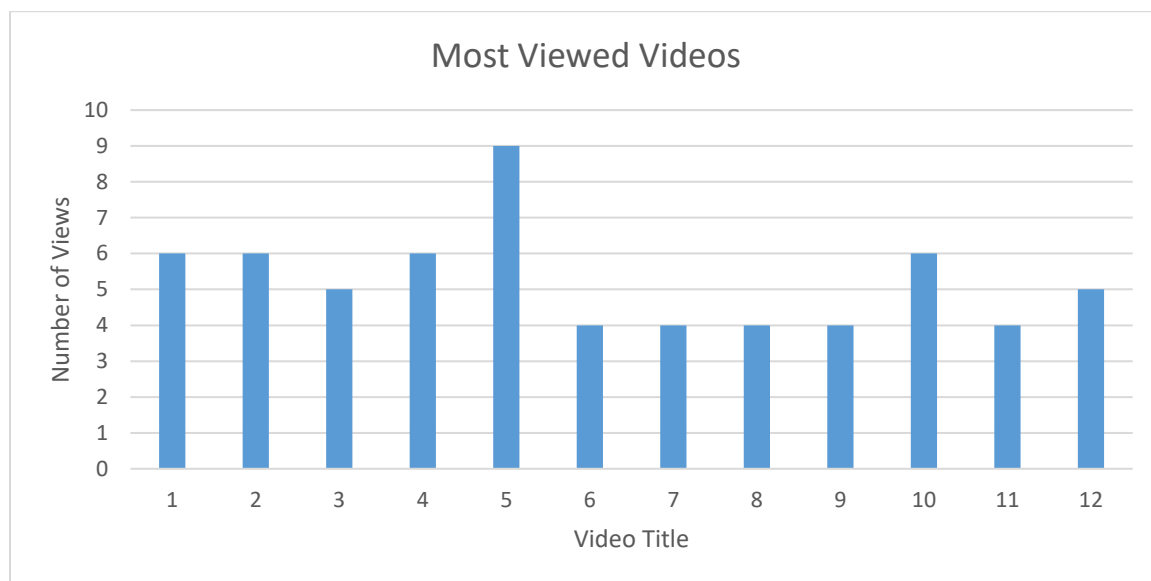
Quantitative data measured were exclusive breastfeeding rates (EBF) the month before and the month of the intervention. There was no statistical change in the overall EBF rates during the intervention month which was disappointing but not unexpected. The percentage of patients receiving the intervention was not as high as planned due to the unexpected increase in patient volume resulting in the displacement of postpartum patients to beds off the postpartum unit. The EBF rate the month prior to the intervention was 55.6% and 55.6% during the intervention month.

Quantitative data also included the number of videos viewed, which varied significantly, and topics viewed. The total number of viewed videos was 123. One subject viewed all 35 videos offered, and one did not watch any. Subjects who viewed videos responded that the videos were helpful 100% of the time. The average number of viewed videos was 10.25. Figure 1 illustrates the variance in the number of viewed videos.

**Figure 1***Viewed Video Totals*

Of the 35 video topics offered, *Common Breastfeeding Positions* was viewed by nine out of 12 patients. The next popular video, *Breastfeeding: Proper Latch-on and Removal from the Breast*, was viewed by seven patients. The remaining videos were viewed by a range of two to six patients. Determining the most chosen topics is significant because it can help determine topics of focus during patient education sessions. Understanding which topics are most sought after may be beneficial during patient education planning. Perhaps, the current prenatal education lacks specific topics, and knowing which topics patients seek more information can help determine which areas of focus to add to the current curriculum. Appendix A lists video topics which were organized by topic categorized as *Getting Started*, *Challenges*, and *Pumping and Storing Breast Milk*. Videos in the *Getting Started* category were the most viewed. Videos in the *Challenges* and *Pumping and Storage* categories were viewed two to three times. Figure 2 illustrates the number of times the most commonly watched videos were viewed.



**Figure 2***Most Viewed Video Titles*

Notes: Titles-1. Making the Decision to Breastfeed, 2. Breastfeeding Your Newborn, 3. Breastfeeding: Breastmilk Production and Benefits, 4. Breastfeeding: Proper Latch-on and Removal from the Breast, 5. Common Breastfeeding Positions, 6. Strategies for Successful Breastfeeding, 7. Breastfeeding Basics (Part 2): Pumping, 8. Newborn Care: Breastfeeding Overview, 9. Hand Expression by UNICEF, 10. The Benefits of Breastfeeding, 11. Secrets to Breastfeeding Success, 12. Most Common Breastfeeding Problems

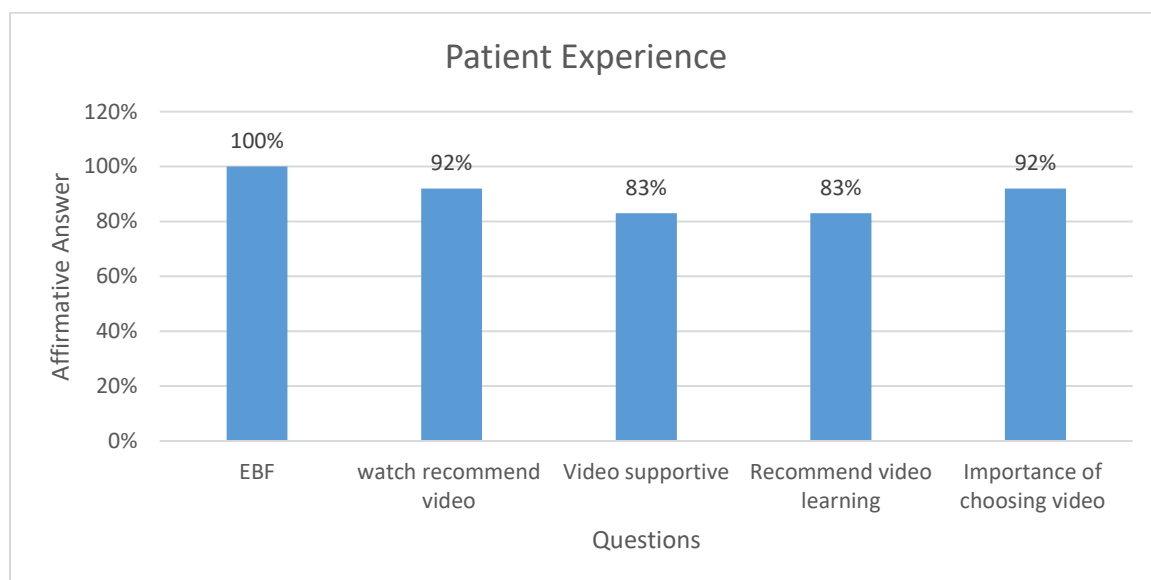
Patients answered survey questions related to their video learning experience. Data were collected to determine the effectiveness of video learning to support breastfeeding as perceived by the patient. Of the patients that watched breastfeeding videos, 100% exclusively breastfed their newborn before discharge. Almost all of the patients watched the recommended video, felt video learning supported their breastfeeding effort, would recommend other patients view breastfeeding videos during their hospitalization and felt choosing their own video topic was important. Figure 3 provides the results of the survey questions. The following questions were asked

- Did you exclusively breastfeed during your hospital stay?

- Did you watch the recommended video?
- Did video learning support your breastfeeding effort?
- Do you recommend that patients watch breastfeeding videos before discharge?
- Was choosing your video from the list important to you?

**Figure 3**

*Patient Survey Response*



### **Qualitative Data**

The purpose of collecting qualitative data was to determine how patients perceived video learning as a way to achieve breastfeeding success. Seven of the 12 subjects meeting inclusion criteria provided comments. Overall, the comments were positive and supportive of video learning for EBF support. There was one negative comment stating, "...pushing new moms to watch videos is a really overwhelming request. Especially during such a transition and trying to recover." This comment was surprising because, during the consent process, there was extensive discussion of

watching the video voluntarily for EBF support. One patient recommended more structure because the video library includes many topics, making it challenging to decide.

The survey results indicated patients found breastfeeding efforts were supported through video learning. The videos were informative, a great resource in the hospital and at home, and provided a refresher from past experiences or from prenatal education.

Responses included:

- “Very helpful videos. I will watch them all.”
- “I love the videos. It helped me to understand more and how to make breastfeeding more comfortable.”
- “I think if I had the videos the 1<sup>st</sup> time I had a baby it would have been more helpful. Since it’s my second, I kind of know but definitely helped/refresher”
- “Videos gave me a quick snippet of what I need to remember when I am home. I got a lot of information while at the hospital, so these videos are great to have access to.”
- “I watched some videos, however, I had already taken the virtual ...breastfeeding class prior to delivery, so I knew and understood most of the topics. A refresher is always good to have as well as resources to use at home if I have any questions or forget anything.
- “I think the videos are helpful to moms seeking extra support.”
- “Good refresher for me.”

## **Process Improvement Data**

### **Outcomes**

While a causal relationship could not be identified during this project, quantitative and qualitative data obtained from patients who viewed breastfeeding educational videos and completed surveys revealed positive outcomes. Patients who viewed videos had an EBF rate of 100% before discharge. The small sample size made it difficult to determine a definitive conclusion; therefore, further investigation is required to determine a relationship. However, patients found the videos helpful, supportive, and an excellent resource to support EBF success. Data revealed that patients like to choose their topics, and some patients like to watch few videos, while some watch all available videos. Patients also liked to receive a video recommendation from the nurse to help narrow down specific topics pertinent to their EBF success. Patients chose common topics. Patients tended to have the same interest or need for specific support. Information about which videos patients preferred is essential data. Videos chosen most often should be included in prenatal breastfeeding education and reinforced during the postpartum period. The opportunity to improve prenatal and postpartum patient education related to known common topics can be beneficial to improving EBF rates.

### **Changes**

This project contributed to increased awareness of valuable patient education resources for patients and team members, including nurses, nursing assistants, and lactations specialists. Patients already had access to the video library, but awareness of the resource and the impact was unknown to both patients and clinicians. During the project intervention, easy access to the breastfeeding video library became available on

the nursing unit by stocking bookmarks with an embedded quick response (QR) code. The bookmarks with QR codes were portable for convenience. Patients had quick, easy access that was convenient for busy parents. Team members are now aware of how to access the video library and can provide the resource to patients. In addition to the bookmarks, the video library was made available through easier access through the patient portal in the electronic medical chart.

### **Impact**

The impact of the project included supporting patients and clinicians to achieve success with EBF before discharge. Easy access to the breastfeeding video library with specific topics recommended or chosen by the patient provides a helpful and supportive resource that may improve EBF rates at the facility and the health of people in the community.

### **Sustainability**

Sustainability will be achieved by presenting the data collected through this project to obstetric nurses and providers to obtain buy-in about the value of video learning to support breastfeeding patients. Communicating easy access to the video library will be essential for sustainability. Ensuring provider offices provide QR codes during the prenatal and postpartum period, prenatal educators provide the bookmarks during prenatal classes, and nursing units ensure availability of QR codes during the hospital stay, will help with the project's sustainability. Routinely incorporating breastfeeding video learning inpatient care planning will ensure nurses recommend a video and all patients have knowledge and access to the library.

### **Measurements for Future Collection**

In the future, the use of the breastfeeding video library should continue to be analyzed and compared to EBF rate trends. As video learning use increases and becomes hard-wired in nursing care plans, breastfeeding rates should rise if a correlation exists between increased video learning and EBF rates. The pandemic caused many challenges on the nursing unit during the intervention. Barriers during project implementation prevented a complete and robust roll-out so further evaluation is needed to better examine the relationship between breastfeeding video support and EBF rates. In the future, it will be important to continue to work with the postpartum nurses to ensure the breastfeeding video library information is accessible to patients so all patients desiring to exclusively breastfeed will be included in the data collection. In addition, future data collection should include race and age demographics on the surveys. The race demographic may provide information about the EBF race disparity, and the age demographic may provide information about who is likely to access the video library.

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## Appendix A

### Video Library/Patient Survey

#### Getting Started

##### Helpful

- Making the Decision to Breastfeed yes/no
- Breastfeeding Your Newborn yes/no
- Breastfeeding: Breast Milk Production and Benefits yes/no
- Breastfeeding: Proper Latch-on and Removal from the Breast yes/no
- Common Breastfeeding Positions yes/no
- Helpful Strategies for Successful Breastfeeding yes/no
- Breastfeeding Basics: Breast Pumping yes/no
- Newborn Care: Breastfeeding Overview yes/no
- Hand Expression by UNICEF yes/no
- Breastfeeding 411 yes/no
- Steps for Hand Expression yes/no
- The Benefits of Breastfeeding yes/no
- Secrets to Breastfeeding Success yes/no
- Breastfeeding Benefits for Mom yes/no
- 4 Most Common Breastfeeding Problems yes/no
- What is Colostrum? yes/no
- What is Re-lactation, and How Do I Do It? yes/no
- What is Breast Milk? yes/no
- When Should You See a Lactation Consultant? yes/no

##### Challenges

- Is Baby Getting Enough Breast Milk?  
yes/no
- Breastfeeding: Overcoming the Challenges of Breastfeeding  
yes/no
  - Handling Stress with Breastfeeding  
yes/no
  - Breastfeeding in Public for New Moms  
yes/no
- Building a Breastfeeding Support Network  
yes/no
  - Breastfeeding as a Single Mom  
yes/no
  - Breastfeeding and Back to Work  
yes/no

- When Baby Won't Latch: Strategies to Help Breastfeeding  
yes/no
  - Is My Baby Getting Enough Milk  
yes/no
  - Uncovering Breastfeeding Misconceptions  
yes/no
- 7 Essential Facts about Breastfeeding and Antidepressants  
yes/no
  - 9 Proven Ways to Increase Milk Supply  
yes/no
    - Smoking and Breastfeeding  
yes/no
    - Tips for Breastfeeding at Work  
yes/no

### **Pumping & Storing Breastmilk**

- Hand Expression in Breastfeeding  
yes/no
- Breastfeeding Basics: Back to Work  
yes/no

**1. Is your baby full term (greater than 37 weeks gestation)?**

**yes/no**

**2. Did your baby need medically ordered formula, glucose gel, or IV therapy?**

**yes/no**

**3. Was your baby healthy enough to stay with you in your room during your stay?**

**yes/no**

**4. Is this your first breastfeeding experience?**

**yes/no**

**5. Did you feed your baby breastmilk for every feeding from delivery to discharge?**

**yes/no**

6. Did you watch the recommended video

yes/no

7. If not, choose a reason from below choices (circle response)

- a. Not interested
- b. No time to watch
- c. Did not seem pertinent to my issues
- d. Other-add

reason \_\_\_\_\_  
\_\_\_\_\_

8. Did video learning support your breastfeeding effort?

yes/no

9. Do you recommend patients watch breastfeeding videos before discharge?

yes/no

10. Was choosing your own video from the list important to you?

yes/no

11. Are there any topics of interest not listed on the video library?

yes/no

If yes, please list.

Thank you for participating. Please share any comments about your breastfeeding support experience related to video learning. Please contact **Carol Mayernik @ 704-333-3383 or [camayernik@novanthealth.org](mailto:camayernik@novanthealth.org)** if you would like to discuss further.

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## Appendix B

## Conceptual-Theoretical-Empirical Diagram

