Spring 4-22-2024

Impact of Baby Friendly on Exclusive Breastfeeding: Befriending Baby Friendly

Constance Z. Townson
University of Texas at Tyler, ctownson@patriots.uttyler.edu

Impact of Baby Friendly on Exclusive Breastfeeding: Befriending Baby Friendly

Constance Townson

The University of Texas at Tyler, School of Nursing

For NURS 5382: Capstone

Dr. J. Michelle Nelson

April 22, 2024

Contents

Acknowledgments

Executive Summary

Implementation and Benchmark Project

1. Rationale for the Project
2. Literature Synthesis
3. Project Stakeholders
4. Implementation Plan
5. Timetable/Flowchart
6. Data Collection Methods
7. Evaluation
8. Cost/Benefit Analysis
9. Discussion of Results

Conclusions/Recommendations

References

Appendices

Acknowledgments

I'm grateful for all my nursing professors at The University of Texas at Tyler throughout the MSN program. I appreciate Dr Ellen Fineout-Overholt, PhD, RN, FNAP, FAAN and her instruction as I learned about evidence-based practice research. I am thankful for the support from Dr Pamela Lake, PhD, RN, AHN-BC through multiple courses. In addition to advising me on this project, she inspired me to seek work-life balance and incorporate holistic health methods for myself and my patients. I would like to thank Dr J. Michelle Nelson for her advice and feedback as I worked to complete this project. Special thanks to Dr Julie George, PhD, RN, ACUE who taught my nursing educator courses and shared all her wisdom, tools, and resources. Sincere thanks to Dr Joyce Sizemore, PhD, RN for her guidance and support as my practicum preceptor. I felt blessed to work with and learn from her because her excitement and love for the nursing profession is infectious. Many thanks to Nuala Murphy, BSN, RN, IBCLC for her listening-ear and advice as I considered a project to help breastfeeding mothers. I would also like to thank my former Nurse Manager Kelly Fossee, MSN, RN, RNC-OB who met with me to discuss our patient needs, and my current Nurse Manager Lynne Flippen, BSN, RN, RNC-MNN who supported me through this project. I am thankful for my nursing friends, Amy Hines, and Ruth Platt, who were with me on this adventure of higher education. Heartfelt thanks to my husband, Carl Townson, for his love and understanding as I spent countless days working on schoolwork instead of time with him in the deer stand. Finally, loving thanks to my parents, Don and Carolyn St. Clair, and my son K.R. Drew, for their unfailing love and support from the moment I decided to go after my dream of becoming a nurse, my ADN RN pinning ceremony, earning my RN-BSN, and pursuing my MSN. Lastly, my favorite quote, "You are never too old to set another goal or to dream a new dream," (Brown, 1992, p. 75).

Executive Summary

Unless you have personally breastfed a newborn baby or tried to help a struggling breastfeeding mother, chances are you would think breastfeeding is not only natural but comes easily. Breastfeeding is indeed a natural progression following delivery; however, various things can play a role in the success of a mother and newborn baby trying to breastfeed. Issues such as feeding position, waking a sleepy newborn, mothers not recognizing newborn hunger cues, a full day of well-meaning visitors impeding skin-to-skin time with mom, or delayed feedings are just a handful. Sometimes, breastfeeding is so difficult that moms who want to breastfeed are willing to quit because it is too frustrating.

World Health Organization (WHO) and United Nations Children's Fund (UNICEF) started Baby-Friendly Hospital Initiative (BFHI) in 1991 as a global program to improve nutritional health, neurological development, and the overall wellness and survival of women and children around the world (Baby- Friendly USA, 2024). The rationale for Baby-Friendly Ten Steps is that exclusive breastfeeding (EBF) for at least six months leads to greater health outcomes for mom & baby and lower rates of infant mortality (CDC, 2021). BFHI defines EBF as not feeding any food sources other than breastmilk (directly from the breast, hand-expressed, pumped, or donated expressed breastmilk), yet recognizes there are instances when breastfeeding is not possible, or supplementation (formula) for the infant is medically necessary (Baby-Friendly USA, 2024).

Research has repeatedly pointed to breastfeeding improving health and wellness of both women and children. EBF for three months or more is associated with a decrease in obesity (13%) and type 2 diabetes (35%) for breast-fed newborns, and reduction in breast cancer for breastfeeding mothers (Baby-Friendly USA, 2022). Not only can it potentially save lives, but

breastfeeding is also more environmentally friendly as it requires no production, distribution, preparation, or waste. Moreover, breastfeeding is the most convenient method of feeding during a national disaster. The question and focus for this benchmark project are therefore, "Among postpartum moms with newborns, how does engaging in Baby-Friendly Hospital Initiative (BFHI) Ten Steps to Breastfeeding compared to no Ten Steps effect exclusive breastfeeding rates within three months of discharge?"

After reviewing literature for evidence-based research and forming the BFHI-EBF question, a benchmark project was born, and a plan was made for a project. Next came a plan to create a team of mother-baby and lactation nurses, creation & review of materials, staff education, collaboration with leadership, intervention roll-out, chart audits, and patient survey collection over a 12-week time-period before a results review. This is a cost-effective project, with the only expense being paid time for team members to meet, educate staff, and review results. Evaluation of results will occur between weeks 5-12, with review of chart audits and patient surveys to determine effectiveness of BFHI interventions on EBF. Review of results begins at week 13, and if the project continues, data will be reviewed monthly moving forward. The outcome of this project is my recommendation that hospitals embrace BFHI Ten Steps, create teams to champion BFHI, and set the expectation for utilizing three or more of the BFHI Ten Steps as part of nursing practice.

Impact of Baby Friendly on Exclusive Breastfeeding: Befriending Baby Friendly

The purpose of this benchmark project is to help mothers and newborns establish successful EBF, while in the hospital setting and upon discharge, as recommended by the Center for Disease Control (CDC) and WHO (CDC, 2021). WHO has found that using the steps outlined by BFHI leads to greater EBF success. Worldwide, only 40% of newborns initiate

breastfeeding at birth, and of those, only 44% are exclusively breastfeeding by 6 months of age (Baby-Friendly USA, 2022). Since inception of BFHI and the Ten Steps to breastfeeding, the number of "babies ever breastfed" has increased 74 to 82%, most probably a result of their endeavor to educate and support mothers and newborns (Baby-Friendly USA, 2024). Patient satisfaction also tends to improve with BFHI, as women who EBF "tended to rate their breastfeeding care in the hospital with a higher score" (Monroe, 2021, p. 259).

Rationale for the Project

The impact of Baby-Friendly practices on EBF and the question for this project are framed on research and recommendations by WHO that Baby-Friendly leads to greater EBF success, and EBF for at least six months leads to greater health outcomes for mom & baby and lower rates of infant mortality (CDC, 2021). The goal of this benchmark project is to assist a mother-baby unit and/or nurse so they can effectively incorporate at least three of the recommended Baby-Friendly Ten Steps to help patients meet their breastfeeding goals, thus contributing to the health and well-being of mothers and infants in our care. All patients can benefit from the education they receive on Baby-Friendly practices, thereby making educated decisions regarding their feeding choices for their newborn.

Literature Synthesis

A systematic search through three electronic databases, Cumulative Index and Allied Health Literature (CINAHL), PubMed, and Cochrane Library in August 2021, September 2022, and January 2024 resulted in twelve articles for this benchmark project. With each search, the same keywords were used from the project question: *exclusive breastfeeding*, *baby-friendly, baby-friendly hospital initiative*, *breastfeeding mothers*, and *breastfeeding infants*, across all databases. All twelve articles support BFHI's stance that Baby-Friendly leads to successful and

exclusive breastfeeding, particularly when the hospital used multiple Baby-Friendly steps (Alakaam, 2017; Clermont, 2021; Crenshaw, 2020; Dumas, 2013; Inano, 2021; Kim, 2018; Lok et al.,2020; Monroe, 2021; Theo, 2017; Weddig, 2011; Yeh et al., 2020; Zhang et al., 2020) (See Appendix A).

The review of literature showed mother-baby dyads were more successful both short and long-term with EBF if they were at a hospital that use three or more of the ten Baby-Friendly steps. According to Yeh et al. (2020), successful breastfeeding is a result of "multi-strategy nursing interventions to overcome individual differences" in patients (p. 27). Those multi-strategy interventions found to be especially relevant in research were immediate and frequent skin-to-skin (SSC), immediate breastfeeding, rooming-in, demand breastfeeding, as well as education and support from nursing/hospital staff (Alakaam, 2017; Clermont, 2021; Crenshaw, 2020; Dumas, 2013; Inano, 2021; Kim, 2018; Lok et al.,2020; Monroe, 2021; Theo, 2017; Weddig, 2011; Yeh et al., 2020; Zhang et al., 2020). Mothers were 2.77 times more likely to EBF with BFHI practice intervention (Kim et al., 2018), with a statistically significant increase in both monthly and overall EBF rates, from 2.4% to 49% with the use of BFHI practices (Clermont, 2021). Research suggests that early and frequent SSC and breastfeeding, and demand breastfeeding play a significant role in EBF at discharge and one to six months postpartum (Clermont, 2021; Crenshaw, 2020; Inano, 2021; Kim, 2018; Lok et al.,2020, Monroe, 2021; Yeh et al., 2020; Zhang et al., 2020).

Mother-baby nurses that are adequately educated in Baby-Friendly Ten Steps are critical for appropriately educating patients and increasing EBF rates (Alakaam, 2017; Clermont, 2021; Crenshaw, 2020; Dumas, 2013; Inano, 2021; Kim, 2018; Lok et al.,2020; Monroe, 2021; Theo, 2017; Weddig, 2011; Yeh et al., 2020; Zhang et al., 2020).When nurses educate and offer

support to mothers with rooming-in and breastfeeding, patients were much more likely to report a positive postpartum experience, rate themselves as successful, and meet their EBF goals (Monroe, 2021; Theo, 2017; Yeh et al., 2020; Zhang et al., 2020). Monroe (2021) noted the correlation between nursing intervention and positive patient perception in patient surveys. Supportive nursing was also noted to positively impact patients regarding rooming-in, with 76% saying they would do so again, and one mother sharing, “The nurses are very encouraging, and it is very helpful having them show me things right here in the room,” (Theo, 2017, p. 81).

Nurses and nurse managers at non-BFHI hospitals recognize and report the importance of breastfeeding. However, when nurses lack proper education and implementation strategies patients are less successful with EBF (Alakaam, 2017; Weddig, 2011). Positive impact on breastfeeding occurred in hospitals where, “Hospital administration and management were also engaged in the BFHI process, allowing for institution-wide reforms and unified messaging” (Clermont, 2021, p. 5).

Finally, recurring barriers to EBF and/or positive patient experience with breastfeeding stem from resistance to new policies and practices, priorly held belief and routines, inadequate education, old or incorrect information, limited support from the hospital or government, and “lack of awareness” (Alakaam, 2017). Nurses at non-BFHI hospitals were not as likely to know best practices related to EBF, and even if educated, were less likely to follow best practice and do their own thing due to lack of policy or support (Weddig, 2011). Knowingly electing to ignore best practice for initiating and promoting EBF and even their patient’s goal to EBF is detrimental to EBF outcomes. Although educated, one nurse stated, “I think it is best for the baby to be skin-to-skin, but it never happens,” then listed off reasons such as gowns and blankets getting in the way (Weddig, 2011, p. 171).

Project Stakeholders

The setting for this change project is a Family Centered Care (FCC) unit (also known as Mother-Baby) at a large, non-profit hospital in Dallas, Texas. Upon admission to Labor & Delivery, patients are asked about their feeding preference (exclusive breastfeeding, pump & feed breastmilk via bottle, donor breastmilk, or bottle-feeding formula) and it is noted in their delivery summary information for doctors, nurses, and lactation nurses to observe. Patient preference will be honored, and the efforts of the proposed project will only impact patients with a goal of EBF. A considerable number of postpartum mothers report their goal is to EBF for 3-6 months or more. However, information gathered from patient rounding and/or patient satisfaction surveys has found that there are patients who do not feel adequately educated or supported in meeting their breastfeeding goals. This benchmark project could positively impact both patient health and patient satisfaction. Breastfeeding benefits and education should ideally be presented to all mothers, but for this benchmark project it will be specifically targeted to those with a goal of breastfeeding their newborn.

Implementation Plan

This benchmark project will consist of 6 major steps, 1) creating educational handouts/posters for nursing education, 2) reviewing the education materials with FCC leadership, 3) establishing a project team and training them, then training the bedside nursing staff, 4) initiation of rooming-in, demand breastfeeding, skin-to-skin (SSC), and patient education, 5) collecting and reviewing data from chart audits and patient surveys, and 6) determining whether the unit will continue the methods utilized during the project. Nursing data collection will occur through audits of nursing charts, and patient satisfaction data gathered through surveys and leadership rounding.

Timetable/Flowchart

Weeks 1-3: project team selection, and education materials, audits, and surveys created by the project leader and then reviewed with leadership. Weeks 4-12: nurses begin educating on benefits of rooming-in, demand breastfeeding, and SSC with their patients. Week 5-12 conduct audits and patient surveys and return to the project leader for review. Week 13+ Evaluate effectiveness of project and determine what implemented changes will continue with or without changes. Timetable/Flowchart included for reference (See Appendix B).

Data Collection Methods

The primary bedside nurse will hand their patient a copy of the patient discharge survey and explain that it is optional but beneficial to improving our patient care. Leadership will pick up the patient survey during their daily rounding, as well as answer any questions, concerns or complaints patients have at that time. The leadership team will give all collected surveys to the project team leader to save data from the 10-question patient survey in an Excel spreadsheet. Data review and discussion will occur at monthly leadership meetings on the first Monday of each month to review efforts. Befriending Baby-Friendly EBP Project Patient Discharge Survey included for reference (See Appendix C). Befriending Baby-Friendly EBP Project Nurse Discharge Audit is the responsibility of the bedside nurse with completion upon patient discharge and placed in the Nurse Manager's mailbox (See Appendix D).

Evaluation

To determine if the project was successful, data collection will occur over multiple months to compare to subsequent months, looking for a positive increase each month in participation from nurses in flowsheet audits, and EBF and patient satisfaction from patient surveys. If the project reveals an increase in EBF and patient satisfaction, it will hopefully

become a part of standard nursing practice on FCC and included with yearly breastfeeding education. If for any reason the benchmark project cannot be enacted, the project leader will work with leadership and lactation to find ways to share the information with the nursing staff and bring about change without the audits and surveys.

Cost/Benefit Analysis

There will be minimal costs associated with this project - approximately 1 hour of paid meeting time per team member per week for holding meetings to organize the team, create educational materials, educate staff at meetings during weeks 1-4. Then for weeks 5-12, there will be approximately 1 hour of paid time per week for the team lead to review and save data in Excel. Finally, the project team lead will also have approximately 1 hour per month of meeting time with leadership each month to discuss progress and again after completion of the project. If continued after the project finishes, the team would spend approximately 1 hour of time each quarter for follow-up meetings, and staff would receive approximately 1 hour of follow-up training each year. Benefits of this project, such as increase in exclusive breastfeeding, improved health, and increased patient satisfaction, far outweigh the minimal associated costs.

Discussion of Results

Proposing a change of nursing practice takes being innovative, as it requires finesse to succeed. Implementing an EBP benchmark project takes creative thinking so that the project comes to fruition while still meeting the needs of the patient, maintaining safety, and gaining support of stakeholders. One of the practice challenges for this project is rooming-in, physicians and nurses dislike it because it interferes with their typical standard of care. Physicians and nurses both tend to prefer completing their newborn assessments, baths, vaccinations, and other tasks in the nursery because it is easier for them to do it away from the prying eyes of parents.

Parents themselves also enjoy newborns going to the nursery because they believe they will sleep better with their newborn in the nursery. Getting physicians to understand the importance of these best practices is a potential ethical issue. The ethical dilemma with physicians will be whether we feel we can withstand the push-back from the physicians without fear of them leaving or complaining to the administration.

Any change to normal practice for healthcare staff and beliefs of parents requires creativity. This benchmark project utilizes educational materials and dialogue scripting created for nurses to discuss questions, concerns, and requests made by patients and physicians. Only after empowering nurses to have difficult discussions with patients and physicians, will we begin to see lasting change. “Empowerment motivates employees to perform at the highest level and exhibit a higher organizational commitment to achieving organizational goals” (Iqbal et al., 2019). Glimmers of success from first-hand personal interactions between the bedside nurse and mother-baby dyads who are successful in breastfeeding will help bolster staff in their practice change. Later, success will come from positive feedback in leadership rounding, surveys, and letters of appreciation from breastfeeding mothers.

Conclusions/Recommendations

In conclusion, while I do not foresee our hospital becoming a Baby-Friendly designated hospital again in the future, there is evidence to suggest that the more Baby-Friendly steps a hospital practices, the more successful the patients are with breastfeeding. It is my suggestion that nurses follow EBP research findings and utilize three or more of the Baby-Friendly Ten Steps to Breastfeeding, as it can lead to EBF, and in turn the health and wellness of women and newborns (CDC, 2021). Additionally, it is my suggestion that hospitals create ‘befriending breastfeeding’ teams to continue educating and encouraging staff, auditing charts, and meeting to

discuss patient feedback, innovative ideas, and future research. Furthermore, as society is very social media driven, it could behoove nursing to embrace this and provide a Facebook page or YouTube channel to provide information, interact with former and/or future patients, and seek participants for 3-month and 6-month feedback surveys. Keeping the goal of patient satisfaction, exclusive breastfeeding, and overall health and wellness of mothers and their newborns should be a priority for hospital systems, hospitals, and leadership, and they would benefit from the work of the team.

Ethically speaking, we must ensure we are educating our patients, offering to help with newborn care and breastfeeding, and letting them make informed decisions. Baby-Friendly can potentially have a negative association with staff, as obtaining the designation is arduous and deviations from expected practices can feel punitive by bedside nurses (those who feed the first bottle for example). However, if we fail to initiate skin-to-skin (regardless of feeding type), do not encourage rooming-in, do procedures out of the room, or fail to help with breastfeeding, we are choosing to give subpar care which is unethical. Rationalizing subpar care and taking away an informed choice may be convenient for the nurse (or physician), but through our negligence we miss the mark with our patients. As Baby-Friendly USA states, “Every mother has the right to evidence-based information…and should be equally supported and treated with dignity and respect for her infant feeding decision” (2024).

References

Alakaam, A., Lemacks, J., Yadrick, K., Connell, C., Choi, H. W., & Newman, R. G. (2017). Breastfeeding practices and barriers to implementing the *ten steps to successful breastfeeding* in Mississippi hospitals. *Journal of Human Lactation*, *34*(2), 322–330. https://doi.org/10.1177/0890334417737294

Baby-Friendly USA. (2022, May 19). *Importance of breastfeeding*. Baby-Friendly USA. https://www.babyfriendlyusa.org/about/importance-of-breastfeeding/

Baby-Friendly USA. (2024, March 20). *The Baby-Friendly hospital initiative*. Baby-Friendly USA. https://www.babyfriendlyusa.org/about/

Brown, L. (1992). Chapter 3: The Power to Change. In *Live Your Dreams* (p. 75). essay, William Morrow and Company.

Centers for Disease Control and Prevention. (2021, July 9). *Recommendations and benefits*. Centers for Disease Control and Prevention. Retrieved September 18, 2021, from https://www.cdc.gov/nutrition/infantandtoddlernutrition/breastfeeding/recommendations-benefits.html.

Clermont, A., Gemayel, J. E., Hammoud, R., Wang, J., Beciu, H., Sinno, M., Berends, W., Rosenblum, N., Bienstock, J. L., Byrnes, K., & Samuels, R. (2021). Effects of a “Baby-Friendly Hospital Initiative” on exclusive breastfeeding rates at a private hospital in Lebanon: an interrupted time series analysis. *BMC Pregnancy and Childbirth*, *21*(1), 385. https://doi.org/10.1186/s12884-021-03816-3.

Crenshaw, J. T., & Budin, W. D. (2020). Hospital care practices associated with exclusive breastfeeding 3 and 6 months after discharge: A multisite study. *The Journal of Perinatal Education*, *29*(3), 143–151. https://doi.org/10.1891/j-pe-d-19-00033

Dumas, L., Lepage, M., Bystrova, K., Matthiesen, A.-S., Welles-Nyström, B., & Widström, A.-M. (2013). Influence of skin-to-skin contact and rooming-in on early mother–infant interaction: A randomized controlled trial. *Clinical Nursing Research, 22*(3), 310–336. https://doi.org/10.1177/1054773812468316

Iqbal, K., Fatima, T., & Naveed, M. (2019). The impact of transformational leadership on nurses' organizational commitment: A multiple mediation model. *European Journal of Investigation in Health, Psychology and Education, 10*(1), 262–275. https://doi.org/10.3390/ejihpe10010021

Inano, H., Kameya, M., Sasano, K., Matsumura, K., Tsuchida, A., Hamazaki, K., Inadera, H., & Hasegawa, T. (2021). Factors influencing exclusive breastfeeding rates until 6 months postpartum: The Japan environment and children's study. *Scientific Reports, 11*(1). https://doi.org/10.1038/s41598-021-85900-4

Kim, S. K., Park, S., Oh, J., Kim, J., & Ahn, S. (2018). Interventions promoting exclusive breastfeeding up to six months after birth: A systematic review and meta-analysis of randomized controlled trials. *International Journal of Nursing Studies, 80*, 94–105. https://doi.org/10.1016/j.ijnurstu.2018.01.004

Lok, K. Y. W., Chow, C. L. Y., Fan, H. S. L., Chan, V. H. S., & Tarrant, M. (2020). Exposure to baby-friendly hospital practices and mothers' achievement of their planned duration of breastfeeding. *BMC Pregnancy and Childbirth*, 1–8. https://doi.org/10.21203/rs.2.18912/v2

Monroe, M., Linares, A. M., & Ashford, K. (2021). Women's perceptions of hospital-based breastfeeding care and the association with exclusive breastfeeding. *Nursing for Women's Health, 25*(4), 257–263. https://doi.org/10.1016/j.nwh.2021.05.008

Theo, L. O., & Drake, E. (2017). Rooming-in: Creating a better experience. *The Journal of Perinatal Education, 26*(2), 79–84. https://doi.org/10.1891/1058-1243.26.2.79

Weddig, J., Baker, S. S., & Auld, G. (2011). Perspectives of hospital-based nurses on breastfeeding initiation best practices. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *40*(2), 166–178. https://doi.org/10.1111/j.1552-6909.2011.01232.x

Yeh, C.-H., Yang, Y.-P. N., & Lee, B.-O. (2020). The effects of a hospital-based perinatal breastfeeding program on exclusive breastfeeding in Taiwan: A quasi-experimental study. *Australian Journal of Advanced Nursing*, *37*(3), 20–28. https://doi.org/10.37464//2020.373.81

Zhang, Y., Yang, J., Li, W., Wang, N., Ye, Y., Yan, S., Wang, S., Zeng, T., Huang, Z., Zhang, F., Li, Y., Yao, S., Wang, H., Rozelle, S., Xu, T., & Jin, X. (2020). Effects of baby-friendly practices on breastfeeding duration in China: A case-control study. *International Breastfeeding Journal*, *15*(1), 1–10. https://doi.org/10.1186/s13006-020-00334-4

Appendix A

Evidence Table

Citation: (i.e., author(s), date of publication, & title)	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	Strength of the Evidence (i.e., level of evidence + quality [study strengths and weaknesses])
1. Alakaam, 2017, Breastfeeding practices and barriers to implementing the ten steps to successful breastfeeding in Mississippi hospitals.	None	Cross sectional	Nurse Managers, N=31, 71% 43 prospective All 43 birthing hospitals in Mississippi, the only one BFHI did not participate. Lowest EBF rate in the US.	4 areas hospital practice related to BF - Individual, Public Policy,Interpersonal, & Institutional	10 sections of questions with 3-7 questions each, scoring algorithm by Texas Ten Step Program. Possible implemental total score 0-100. 0-24.9 = low, 25-74.9 = partial, 75-89.9 = moderate, 90-100 = high. Also 10 questions re barriers with categorical answers.	IBM SPSS and Pearson correlation tests.	M=65.45, SD=13.84. Low: M=0, n=0, Partial: M=59.5, n=22, Moderate: M=80, n=9, High: M=0, n=0.	**LOE:** IV **Quality Strengths:** Barrier questions show misconceptions, inconsistencies, and concerns related to each of the BFHI Ten Steps. Shows need for BFHI implementation. **Quality Weaknesses:** Nurse Managers could have bias from personal experience or perspective. **Recommendations:** Excellent for showing disparities among wealthier states with the benefit of BFHI hospitals, Lactation Nurses, and resources, and the impact that has on EBF.
2. Clermont, 2021, Baby-Friendly Hospital Initiative" on exclusive breastfeeding rates at a private hospital in Lebanon: an interrupted time series analysis.	None	Quasi-Experimental, interrupt-ed time series analysis study.	2,002 newborns from Nov'15 to Feb '18 2018 at Clemen-ceau Medical Center in Beirut, Lebanon	**IV Phase #1:** Update Hospital Policies & Infrastructure re BF. **IV Phase #2:** Changes to Healthcare Practices on BF. **IV Phase #3:** Improvements in Patient Education on BF.	Interrupted time series, 3 phases, retrospective. Mean EBF measure before/after 3 phases. EBF rate = # EBF / # total newborn births. ITSA command suite in STATA version 15 software Independent audit & validated by a third party.	There was a 95% CI with each phase of the IV	Statistically significant increase in monthly and overall EBF rates. Seen by Figure 1 and Table 2 on page 5 of the article. Points to increase in EBF rates from 2.4% to 49%	**LOE**: III **Quality Strengths**: Objective data, collected continuously from before IV phase 1 to after phase 3, not just before & after IV. 2,002 participants. **Quality Weakness**: Retrospective, single location, no control group. EBF rate at discharge is an indication of 6-month rate, but no follow-up. **Recommendation**: Excellent for showing how hospital leadership & support across different healthcare staff (doctors, nurses, administration, lactation), along with education for staff and patients, and promotional items that point to EBF all help increase EBF rates.
3. Crenshaw, 2020, Hospital care practices associated with exclusive breastfeeding 3 and 6 months after discharge: A multisite study.	None	Cross-sectional Descriptive Study	Surveys collected from PP pts delivered at 6 geographically different hospitals in the United States. At 3 mo. 672 of 968 surveys answered. At 6 mo. 437 of the 672 surveys answered.	**IV1**: SSC immediately following birth **IV2**: rooming-in 23 or more hours per day. **DV**: EBF at 3 & 6 months	Anonymous surveys, utilizing tools supporting BFHI standards, researchers collected data from PP mothers re. the maternal care practices they received following delivery, and whether they BF at 3- and 6-months PP. 43 questions. Intuitive. Data analyzed with descriptive statistics and	Association between SSC & Rooming-in & EBF at 3 & 6 months were determined with Chi square analysis.	**IV1**: DV 88% vs 80% more likely. **IV2**: DV 62% vs 52.4% more likely.	**LOE:** VI **Quality Strengths**: Questions intuitive & based on the previous question. Multisite from 6 different areas of the country represented diverse population. No harm, anonymous. **Quality Weaknesses**: Data did not indicate when or why infants were weaned, only if they were EBF at 3 and 6 months. Unable to make comparisons between first and second survey groups. **Recommendation**: this would benefit my Mother-Baby patients as they strive to EBF. Confirms BFHI Ten Steps practices impact on EBF at 3-6 months of age is important for nurses.

Legend: BF=Breastfeeding; BFHI = Baby Friendly Hospital Initiative; CI = Confidence Interval; DV= Dependent Variable; EBF = Exclusive Breastfeeding; Discharge = D'C. IR= Interrater Reliability; IV= Independent Variable; LOE = Level of Evidence; L&D=Labor and Delivery; LDRP=Labor, Delivery, Recovery, Postpartum; MA=Meta analysis; NICU=Neonatal Intensive Care Unit; PP=Postpartum; QUAL=Qualitative; RCT=Randomized Controlled Trial, SR=Systematic Review; SSC=Skin-to-Skin Care.

Citation: (i.e., author(s), date of publication, & title)	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	Strength of the Evidence (i.e., level of evidence + quality [study strengths and weaknesses])
					nonparametric tests.			
4. Dumas, 2013, Influence of skin-to-skin contact and rooming-in on early mother–infant interaction: A randomized controlled trial.	None	RCT. Longitudinal, 4 years, random, 8 groups. Videos mother-baby BF blindly scored	151 mother-baby couplets	**IV1:** SSC, **IV2:** Rooming-In, **IV3:** Swaddling **DV:** Mother-Baby interaction during BF on day 4.	Dumas & colleagues 2005 "Assessment Tool for the Observation of Mother/ Infant Interaction" made, validated, & each item had.80 reliability. Interactions videoed and scored by same researcher.	Pearson's chi-square, with alpha=.05	**Mother latching with IV's. IV1:** SSC-@birth; no statistical significance. **IV2:** Rooming-in, general; $x^2 = 9.181$, p=.010, 2 *df.* Rooming-in starting at delivery; x^2= 9.292, p= .010, 2 *df.* **IV3:** Swaddling.$X^2 = 6,918$, p=.031, 2 *df*	**LOE:** II **Quality** – **strengths:** Video of day 4 interactions were made and viewed/scored by the same researcher. **Quality-weaknesses:** The study had 151 participants, but bivariate statistics were used, and subgroups were small. **Recommendation:** The research shows a marked difference in loving behaviors during BF as well as general care when mothers had early and frequent SSC, those rooming-in, and not swaddling their infants.
5. Inano, 2021, Factors influencing exclusive breastfeeding rates until 6 months postpartum: The Japan environment and children's study.	None	Cohort Study	80,491 subjects, nationwide birth study in Japan	**IV 1**: SSC within 1 hour **IV 2:** BR time after delivery **IV3:** Rooming-In	Multiple logistic regression model, SAS version 9.4.	Statistical significance 5%, 95% CI.	37.4% EBF 6 months PP. 36.3% 1st time mothers, 84.6% had vaginal delivery, 7.2% obese.	**LOE:** IV **Quality Strengths**: Large cohort study, all hospitals in Japan, followed up surveys PP. **Quality Weakness:** There could be recall problems as first surveys were completed 1 month PP and recall of EBF and childcare habits at 6 months PP. **Recommendations:** Excellent for showing impact on an entire nation. Copious amounts of data, 6 months of follow-up with patients.
6. Kim, 2018, Interventions promoting exclusive breastfeeding up to six months after birth: A systematic review and meta-analysis of randomized controlled trials.	None	SR & MA of RCT. Medline, Embase,Cochrane,CINAHL,PsycINFO, & Korea Med, 01-00 and 08- 17. Search 1 04-16 Search 2 08-17	27 RCT's	**IV**: BFHI **DV:** EBF at 6 months	MA of 27 RCT's using varied methods of measurement.	95% CI	Kim and colleagues found mothers were 2.77 times more likely to reach the desired outcome of breastfeeding at 6 months with BFHI intervention, especially if multiple BFHI steps were used.	**LOE:** I **Quality - Strengths:** Two pairs of reviewers looked at the studies to pick those suitable for review, duplicates were removed, only those will full length papers were considered, and they were screened for eligibility including a minimum of six months study time – resulting in 27 RCTs. **Quality - Weaknesses:** Some studies were excluded because they stopped tracking data before 6 months, only healthy mother-baby couplets were included, and social/cultural factors may be a large determinant in participation. **Recommendation:** This study supports BFHI intervention leads to EBF rates at 6 months. Research in non-healthy babies & consideration of social/cultural factors could be beneficial.

Legend: BF=Breastfeeding; BFHI = Baby Friendly Hospital Initiative; CI = Confidence Interval; DV= Dependent Variable; EBF = Exclusive Breastfeeding; Discharge = D'C. IR= Interrater Reliability; IV= Independent Variable; LOE = Level of Evidence; L&D=Labor and Delivery; LDRP=Labor, Delivery, Recovery, Postpartum; MA=Meta analysis; NICU=Neonatal Intensive Care Unit; PP=Postpartum; QUAL=Qualitative; RCT=Randomized Controlled Trial, SR=Systematic Review; SSC=Skin-to-Skin Care.

Citation: (i.e., author(s), date of publication, & title)	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	Strength of the Evidence (i.e., level of evidence + quality [study strengths and weaknesses])
7. Lok, 2020, Exposure to baby-friendly hospital practices and mothers' achievement of their planned duration of breastfeeding	None	Cohort	1,011 healthy BF mom & baby couplets, at 4 public hospitals residing in Hong Kong.	**IV1:** Initiate BF within 1 hour delivery **IV2:** No food other than breastmilk **IV3:** Rooming-in **IV4:** Encourage Demand BF **IV5:** No pacifier **IV6:BF** info & support at D'C	Multi-center prospective cohort study. In person initial question, chart review, phone interview at 1,2,3,6, & 12 months or until weaned.	Regression models study effect, one or more IV's/ BFHI practice & mothers BF goal. Hosmer-Lemeshow test model applicable.	55% reached their goal for BF duration. 4.5x more likely to reach BF goal if all 6 BFHI hospital practices were utilized. Statistically significant for IV2(aOR = 2.11; 95% CI 1.48–3.01) and IV6 (aOR = 1.36; 95% CI 0.92–2.00)	**LOE**: IV **Quality Strengths**: Study attrition was minimal, 97.6% on follow-up of data, large sample size. **Quality Weaknesses**: Participants were not recruited based on population. No data on those who chose not to participate. Self-reported BF data (although historically this is accurate even years later). **Recommendation**: Provides reasoning for asking the patient for their long-term BF goal before discussing BFHI practices so pt is educated from the viewpoint that these things will help ensure success.
8. Monroe, 2021, Women's perceptions of hospital-based breastfeeding care and the association with exclusive breastfeeding.	None	Observational Mixed Methods Study	932 bed hospital with 2K births each year, where 50% of moms supplement with formula. 34 participants who wanted to EBF.	**IV** Baby Friendly Ten Steps	Modified Questionnaire for the Breastfeeding Mother (M-QBFM) by BFHI, 17 questions score 0-17 each. Also email survey at 2 weeks with 4 open-ended questions	SPSS version 26. t-test between non & BF moms.	Level of significance 5% ($p \leq .05$). EBF n = 25 (74%), Not EBF n=9 (26%). M-QBFM score p =0.42	**LOE:** III **Quality Strengths**: Study focused on perceptions of mothers re BF practices and whether they felt it led to their EBF goal. **Quality Weakness**: Only 12 (35%) answered the email survey at 2 weeks postpartum after discharge. **Recommendation:** Supports patient perspective that BFHI positively impacts EBF**.**
9. Theo, 2017, Rooming-in: Creating a better experience.	None	Mixed Methods, Quantitative and Qualitative Descriptive	Hospital, 30 couplet-care beds. 25 PP moms.	**IV:** Rooming-in	Likert Scale questionnaire and some open-ended questions	64% rated sleep good or fairly good, 24% fairly bad, 12% bad. 96% rated rooming-in positively	60% reported positive rooming-in and 76% report they would room-in again	**LOE:** VI **Quality Strengths:** Used an established survey from 2002"Six Simple Questions survey," study at teaching hospital, team compared results with literature and developed new plan for rooming-in. **Quality Weaknesses**: 52% of the 25 participants had cesarean sections, 56% were first time mothers Small sample size. **Recommendations**: Excellent for discussing the pros and cons of BFHI and how different aspects of hospitalization and postpartum effect EBF.

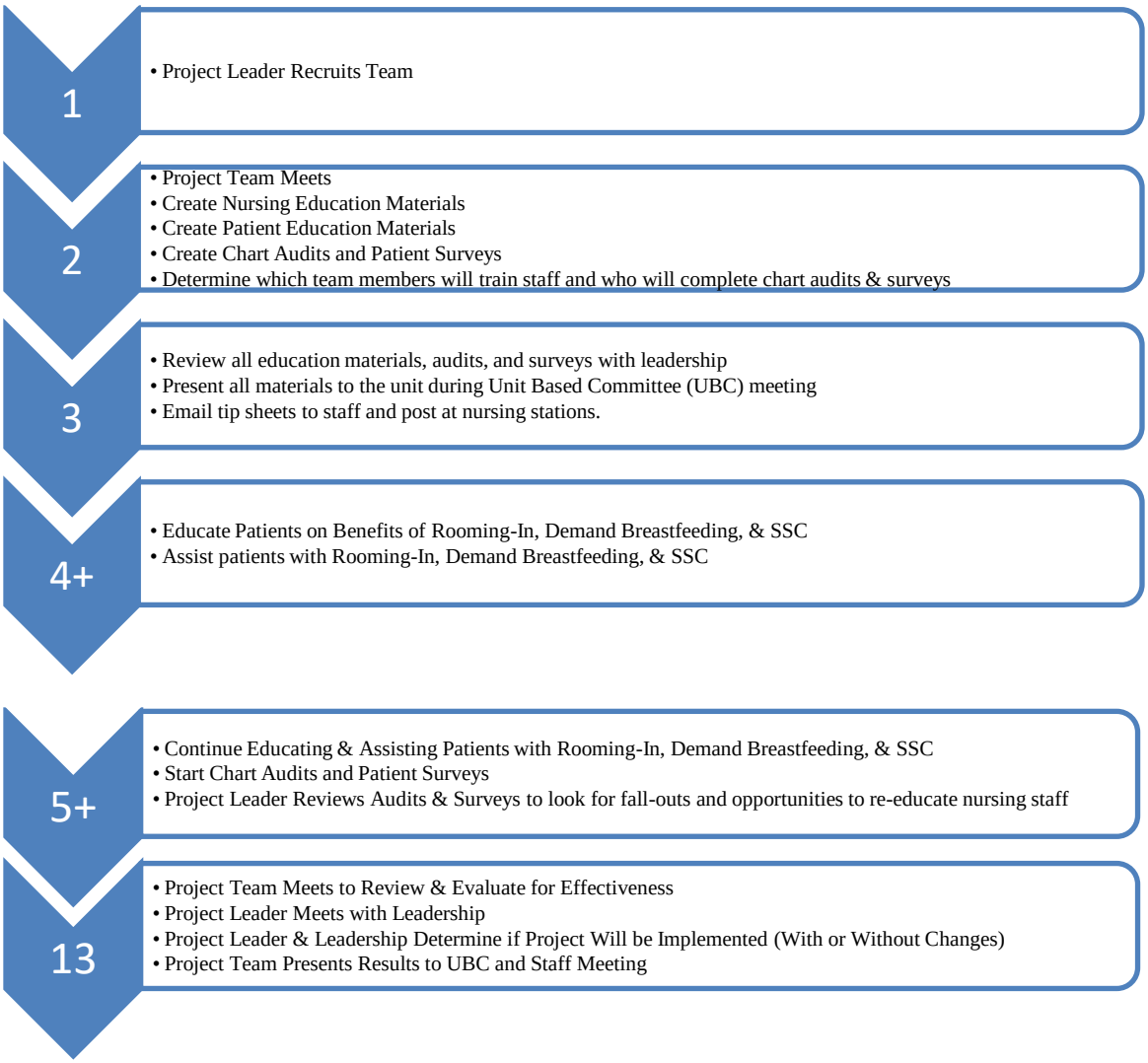
Legend: BF=Breastfeeding; BFHI = Baby Friendly Hospital Initiative; CI = Confidence Interval; DV= Dependent Variable; EBF = Exclusive Breastfeeding; Discharge = D'C. IR= Interrater Reliability; IV= Independent Variable; LOE = Level of Evidence; L&D=Labor and Delivery; LDRP=Labor, Delivery, Recovery, Postpartum; MA=Meta analysis; NICU=Neonatal Intensive Care Unit; PP=Postpartum; QUAL=Qualitative; RCT=Randomized Controlled Trial, SR=Systematic Review; SSC=Skin-to-Skin Care.

Citation: (i.e., author(s), date of publication, & title)	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables Studied and Their Definitions	Measurement of Major Variables	Data Analysis	Study Findings	Strength of the Evidence (i.e., level of evidence + quality [study strengths and weaknesses])
10. Weddig, 2011, Perspectives of hospital-based nurses on BF initiation best practices.	None	QUAL, Focus Group Study Analysis	40 nurses from Women's Services – 9 L&D, 13 PP, 12 LDRP, and 6 NICU	**IV:** Nurses knowledge of BF and personal practice, & informal/formal hospital BF policies **DV:** Increase rates of EBF through use of BFHI practices	Research attempted to learn the differences of nursing care, related to BF, through careful selection of focus groups. Information was taped and transcribed, and accuracy approved by an assistant who was present during the focus groups.	IR determined by research consultant, who analyzed transcripts, & compared them with the study's researcher and agreed 100% on the themes from each question.	Research proved that "non-BF/BFI hospitals lacked policies about BF, and the nurses lacked the knowledge of BF best practices necessary to support initiation"	**LOE:** II **Quality Strengths:** Data was separated into two major themes – hospital policies and nursing knowledge/practice. Quotes from nurses convey why they feel that BFHI practices are good or why they feel they are unable to accurately carry them out due to time &/or patient needs such as sleep for moms or blood sugar for babies. **Quality Weaknesses:** Research was only conducted in Colorado, with 40 nurses. **Recommendation:** The study provided insight into nursing real or perceived obstacles with educating & assisting patients with BF.
11. Yeh, 2020,The effects of a hospital-based perinatal breastfeeding program on exclusive breastfeeding in Taiwan: a quasi-experimental study	None	Quasi-experimental study	60 mother-baby couplets in a BFHI hospital	**IV1**: Prenatal BF educ. **IV2**: Continuous Kangaroo Care (SSC) **IV3:** Rooming-in **IV4:** BF on cue **IV5:** Hospital support visits **DV1**: EBF rates at discharge **DV2:** 1 month postpartum	Experimental Group with BFHI practices, Control group with regular care both measured EBF rate at discharge and 1 month postpartum	**DV1:** EBF x2= 13.32, $p < .01$ **DV2:** EBF x2 =15.95, $p < .001$ Differences were statistically significant.	93.3% of experimental group & 53.3% of control group EBF at discharge. 83.3% of experimental group & 36.7% of control group EBF at 1 month postpartum.	**LOE:** III **Quality - strengths**: Included prenatal and postnatal education services. **Quality- weaknesses**: Telephone follow-ups resulted in answering questions, which could have impacted results. MIL interference/cultural views of SSC/baby being cold. **Recommendation**: Early and continuous kangaroo care (SSC) and on cue BF increases EBF.
12. Zhang, 2020, Effects of baby-friendly practices on breastfeeding duration in China: a case-control study	None	Case control study	421 mothers & their newborn. 245 (EBF) and 176 (Not BF) from 4 large hospital in China that use BFHI. Survey at 3 months, self-reported questionnaire April '18-March '19	**IV1**: China Hospitals that All BFHI Ten Steps **DV**: Feeding pattern at 3 months	Mothers in both EBF and NBF groups answered a survey with 10 questions – 1 for each of the BFHI Ten Steps. Rates determined per hospital	Descriptive Statistical Analysis 58.10% engage 7 of the 10 steps. 65.57% EBF engaged in at least 7 steps vs 47.42% of NBF. OR 2.086, 95% CI 1.403, 3.101	Those who were EBF at 3 months were exposed to more BFHI steps.	**LOE:** IV **Quality** St**rengths:** Surveys were yes/no questions regarding use of BFHI ten steps, 1 question per BFHI practice. **Quality Weaknesses**: Results at 3-month check-ups and could have been from areas more likely to EBF. Self-reporting bias or recall problems. Questions regarding BFHI steps 1 & 2 about having a hospital BF policy and training staff may not correctly reflect the way China implements BFHI Ten Steps. **Recommendation**: Marked difference in EBF at 3 mo. for patients who engage in BFHI, especially if >7 of the 10 BFHI steps were utilized. Only 1.7% less likely EBF < 7 BFHI.

Legend: BF=Breastfeeding; BFHI = Baby Friendly Hospital Initiative; CI = Confidence Interval; DV= Dependent Variable; EBF = Exclusive Breastfeeding; Discharge = D'C. IR= Interrater Reliability; IV= Independent Variable; LOE = Level of Evidence; L&D=Labor and Delivery; LDRP=Labor, Delivery, Recovery, Postpartum; MA=Meta analysis; NICU=Neonatal Intensive Care Unit; PP=Postpartum; QUAL=Qualitative; RCT=Randomized Controlled Trial, SR=Systematic Review; SSC=Skin-to-Skin Care.

Appendix B

Flowchart



Appendix C

Instrument

Befriending Baby-Friendly EBP Project - Patient Discharge Survey

All information will be used to improve our patient care and will not be shared with anyone other than members of the project team. Your name will not be saved, and this page will be shredded. Thank you for participating!

Name:
Age:
Number of Children Counting this Newborn:
Have you breastfed before: Yes No
Date of Delivery:
Gestation at Delivery:
Delivery Date:

1. Did your Nurse discuss the benefits & encourage/assist you to do **Skin-to-Skin (SSC)** with your newborn during your stay on the Mother-Baby unit? **Yes No**
2. Did you practice **SSC** with your newborn during your stay on the Mother-Baby unit? **Yes No**
3. Did your Mother-Baby Nurse discuss the benefits of **Rooming-In**? **Yes No**
4. Did you **Room-in** with your newborn during your stay (leaving your room for no more than 1 hour a day)? **Yes No**
5. If you did not **Room-in** with your newborn, was it by choice? **Yes No** ***If Yes, skip to Question # 7?*
6. If you were told your newborn needed to go to the Nursery, was it for a procedure that could not be done in the room (circumcision, tongue-tie, digit tie-off, Xray, continuous monitoring, or sterile lab work)? **Yes No**
7. Did your Mother-Baby Nurse discuss the benefits of **Demand Breastfeeding**? **Yes No**
8. Did you **Demand Breastfeed** (feed every time the baby shows hunger cues instead of a set time) during your stay on the Mother-Baby unit? **Yes No**
9. Did you feel you were supported in your personal breastfeeding goals during your stay on the Mother-Baby unit? **Yes No**
10. Did you meet your **personal goals for breastfeeding**, whether exclusive, breast & bottle, or pump & feed? **Yes No**

Thank you for your time,

THD Family Centered Care EBP Project Team

*This tool created by Constance Townson, BSN, RN, RNC-MNN Befriending Baby-Friendly EBP Project Leader

Appendix D

Instrument

Befriending Baby-Friendly EBP Project - Nurse Discharge Chart Audit

All information will be used to improve our patient care and will not be shared with anyone other than members of the project team. Thank you for participating!

Discharging RN Name:
Patient MRN:

1. Has an RN charted education on **Skin-to-Skin (SSC)** while on the Mother-Baby unit? **Yes No**
2. Was **SSC** charted in the flowsheet at least once during their stay on the Mother-Baby unit? **Yes No**
3. Has a RN charted education on **Rooming-In**? **Yes No**
4. Did the newborn **Room-in** at least 23 hours a day? **Yes No**
5. If the baby did not **Room-in**, was it by choice? **Yes No** ***If Yes, skip to Question # 7?*
6. If the newborn did not **Room-in**, was it necessary for a procedure not able to do in the patient room (circumcision, tongue-tie, digit tie-off, Xray, continuous monitoring, or sterile lab work)? **Yes No**
7. Has an RN charted education on **Demand Breastfeeding**? **Yes No**

Thank you for your time,

THD Family Centered Care EBP Project Team

*This tool created by Constance Townson, BSN, RN, RNC-MNN Befriending Baby-Friendly EBP Project Leader