Increasing First Time Mothers' Breastfeeding Confidence Using Post-Hospital Discharge Phone Support: A Quality Initiative

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Executive Summary

The lactation department at St. David's Georgetown Hospital implemented a quality improvement (QI) project that aimed to increase the number of mothers receiving out-of-hospital breastfeeding support and improve breastfeeding confidence through the implementation of a breastfeeding support phone call by an International Board-Certified Lactation Consultant (IBCLC) between one and two weeks postpartum. Project goals included completing a breastfeeding support phone call with 80% of first-time breastfeeding mothers discharged between June 1st and September 14th, 2021, and for 100% of participants to report an increase in confidence following the phone call.

Project Implementation

This project was developed by the nursing leadership team within the Women's Services department and increases the number of patients who receive breastfeeding support after discharge. Prior to project implementation, no patient follow-up was completed past discharge. This QI project demonstrates a commitment to the health, well-being, and breastfeeding success of the families in the Georgetown community.

The intervention was completed by the project lead, the unit IBCLC. Eligible participants were identified, and verbal consent was obtained. Participants completed a survey within four hours of hospital discharge that measured their baseline breastfeeding confidence. Responses were recorded and labeled with a random participant number. Between one and two weeks later, the project lead delivered the postpartum breastfeeding support phone call to the participant. The participant then completed a post-phone call survey to re-assess their breastfeeding confidence. Responses between the 2 surveys were compared and the number of completed consults was recorded.

Results

Of the 50 first-time mothers who delivered between June 1st and September 14th, 2021, at St. David's Georgetown Hospital, 40 received a phone consultation. This met the project goal of 80%. Results showed 60% of participants reported the phone call increased their confidence. While this fell short of the project goal, it demonstrated a positive impact. Results also demonstrated that only 16% of mothers received postpartum breastfeeding support after discharge outside of the phone call.

Impact

This project builds the foundation for a lactation program that aspires to support mothers in Central Texas through prenatal education, outpatient consultation, and community collaboration. The results of this project demonstrate that a breastfeeding support phone call increased breastfeeding confidence in this group of first-time mothers and that most participants did not receive lactation support past hospital discharge. It also demonstrated that reaching families via phone in the immediate postpartum period may be convenient and effective. Although this project requires a financial investment of hiring specialized nursing staff, the long-term benefits have the potential to outweigh the cost.

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Per the Centers for Disease Control and Prevention's (CDC) Breastfeeding Report Card, only 23.9% of infants in Texas are exclusively breastfed through six months of life (CDC, 2020). This statistic falls short of the Healthy People 2030 goal of 42.4% and demonstrates the need for postpartum breastfeeding support (DHHS, n.d.). To address this disparity, the Women's Services leadership team at St. David's Georgetown Hospital implemented a quality improvement (QI) project that extended breastfeeding support past hospital discharge through a breastfeeding support phone call between one and two weeks postpartum. The purpose of this QI project was to increase breastfeeding support and confidence in first-time mothers between one and two weeks postpartum through the completion of a breastfeeding support phone call with an International Board-Certified Lactation Consultant. (IBCLC). This initiative is supported by the U.S. Department of Health and Human Services (DHHS), who states peer support and community breastfeeding support may help more women breastfeeding exclusively (n.d.).

Background

Review of the Literature

Current literature supports the need for an increase in breastfeeding support to promote breastfeeding exclusivity and duration. The American Academy of Pediatrics (AAP) reports that exclusive breastmilk feeding promotes ideal infant and child growth and development and promotes adult health (2012). The benefits of breastmilk are vast: lower rates of bacteremia, diarrhea, respiratory tract infections, necrotizing enterocolitis, otitis media, urinary tract infections, type 1 and type 2 diabetes, lymphoma, leukemia, Hodgkin's disease, and childhood obesity are found in infants who receive breast milk as their primary source of nutrition for the

six months of life (AAP, 2021). In addition to benefitting the infant, breastfeeding also protects the mother from breast and ovarian cancers, type two diabetes, and aids in postpartum weight loss (AAP, 2021). The advantages are financial as well. According to the United States Department of Agriculture (USDA) (2019), 13 billion dollars would be saved annually within our healthcare system if 90% of infants were to be exclusively breastfed for six months. It is evident that breastfeeding is key for the health of our community. Lechosa-Muniz et al. (2020) discovered in their cohort study that infants who were not breastfed required more healthcare services in the first year of life due to infectious causes that included primary care visits, hospital admissions, and emergency department visits. Hospitals are incentivized to promote practice that supports lactation in the inpatient setting, but many women are discharged home without any breastfeeding assistance (Nelson & Grossniklaus, 2019). To achieve the Healthy People 2030 goal for 42.2% of infants to be exclusively breastfed at six months of life, hospital systems and lactation professionals need to create a network of care for the mother and infant after discharge home (DHHS, n.d.).

Delivering postpartum support via a breastfeeding support phone call by an IBCLC is supported by current literature. In their randomized control trial on how postpartum breastfeeding support phone calls impacted a mother's breastfeeding experience in Japan, Hongo et al. reported that phone support positively impacted breastfeeding confidence (2020). Mothers in their study who received this mode of support through four months postpartum reported an increase in lifestyle compatibility with breastfeeding (Hongo et al., 2020). The care provided by an IBCLC is also evidence-based to improve outcomes, as Chiuro et al. reported in a prospective cohort study of 402 mothers that the implementation of an IBCLC within a community hospital maternity ward increased patient satisfaction and comfort while breastfeeding (2015).

Description of the Problem

After disbanding the lactation department at St. David's Georgetown Hospital in 2017, exclusive breastfeeding rates plummeted to 26% and patient satisfaction scores sunk. According to the Director of Women's Services, patients wrote letters to hospital administration citing the lack of breastfeeding support and their intent to deliver at a different facility in the future. In response, the senior leadership team made it an institutional priority in 2021 to re-start their lactation program and extensively support breastfeeding mothers, even past hospital doors. The program was reinstated in February of 2021 and a new unit IBCLC was hired. A multitude of goals were set, including providing support post-hospital discharge that would raise maternal confidence. Providing a breastfeeding support phone call demonstrates the St. David's mission to provide exceptional care and achieve customer loyalty (St. David's Healthcare, 2021).

Theoretical Framework

This project utilized the Plan, Do, Study, Act (PDSA) Framework. This is one of the most frequently used tools in healthcare quality improvement projects (Christoff, 2018). This process is featured within the Institute for Healthcare Improvement and includes four parts: plan, do, study, and act (Christoff, 2018).

In the planning phase, the project leader generated participant surveys, data collection forms, consultation check lists, and a timeline of project goals. The do phase included implementation of the project and data collection. The study phase included data analysis. Once analyzed, the act phase included results review by the Women's Services leadership team to assess if project goals were met and future implications for the institution. Dissemination also took place during this time.

Purpose Statement and Project Aims

The purpose of this project was to improve breastfeeding confidence in first-time mothers who were discharged from St. David's Georgetown Hospital between June and September of 2021. This project aimed to increase confidence in 100% of participants, which adheres to the unit's mission to deliver exceptional patient care. This quality initiative also aimed to reach 80% of all first-time breastfeeding mothers discharged from the facility at this time, since the intervention was completed solely by the lactation department lead who was allocated 10 hours per week for project completion. The question this project seeks to answer is in first-time breastfeeding mothers, will a breastfeeding support phone call improve reported feeding confidence between one and two weeks postpartum when compared to hospital discharge?

Methods

Project Design

This QI project utilizes a before and after design. This includes measurement before and after the intervention to determine if goals were met. Maternal breastfeeding confidence was measured prior to hospital discharge via survey as a baseline, and again after completion of the postpartum breastfeeding support phone call. Likert scales were utilized. Participant responses before and after were compared. Participants were also asked if they were still breastfeeding after the intervention. This design provided measurable data to determine if project goals were achieved.

Prior to project implementation, a SWOT analysis was conducted, as shown in Figure 1. This project required minimal resources. The main resource was time expenditure during patient phone calls, data collection, and the data analysis process. Necessary technical resources were readily available (phone, computer, and internet access). The project lead spent ten hours per

week on follow-up phone consultations, data collection, and analysis. The benefits of this project greatly outweighed the risks. Providing an extension of care promotes customer loyalty and higher levels of patient confidence. Breastfeeding support is anticipated to lead to longer breastfeeding duration, resulting in improved health outcomes in the community.

Participants and Recruitment

This project plan was reviewed and approved by the Women's Services Leadership Team at St. David's Georgetown Hospital. Recruitment of participants took place during their pre-discharge consult with the project lead. Participants were asked for verbal consent to participate in the QI project. The participant was reassured that no patient identifying information was recorded and that their phone number on file would be used, but also not recorded. The recruitment/pre-discharge consult was completed within four hours prior to hospital discharge.

The participant population included 40 first-time exclusively breastfeeding mothers who gave birth and were discharged from St. David's Georgetown Hospital between June 1st and September 14th of 2021. Their infant was required to be full-term (37 to 42 weeks) and overall healthy, as described by the Pediatrician in the newborn admission summary. Twins were included. Mothers who utilized a breast pump with direct breastfeeding were also included. Mothers who chose to supplement with formula, solely formula feed, had an infant that required formula supplementation, or were admitted to the Neonatal Intensive Care Unit (NICU) were excluded. This was due to a limited participant capacity, since the intervention was completed by one individual. Mothers who reported receiving breastfeeding support after hospital discharge before their phone call consult were also excluded to decrease cofounding variables. Mothers who could not speak English were excluded due to lack of professional translation services.

Intervention

The intervention took place from June 1st, 2021, through September 14th, 2021. First, the project lead identified an eligible participant using the inclusionary and exclusionary criteria provided. They then obtained verbal consent from the participant. The participant was reassured that no patient identifying information is recorded and that their phone number on file will be used, but not recorded. The participant was then asked to complete a survey that measured breastfeeding confidence and continued with discharge home. One to two weeks later, the project lead completed the breastfeeding support phone call. A consult checklist was adhered to, to ensure consistency. The checklist is shown in Appendix A. The consult lasted between 10 and 30 minutes, with an opportunity at the end for the participant to ask questions. Verbal educational methods were used and online educational websites for later reference were provided upon participant request. Once the consult finished, the participant completed the post-consult survey to measure their post-consult breastfeeding confidence. Pre-discharge and post-consult surveys were placed together for data collection and analysis. Once the project lead finished completing consults by September 14, 2021, participant survey responses were recorded in a Microsoft Excel document for analysis. See Figure 2 for a sample intervention timeline.

Measurement Tools

Surveys were the measurement tool utilized in this project. To increase reliability, the project lead completed all surveys and phone consultations. This decreased variance. The first survey was given pre-discharge and utilized a Likert Scale format. Participants were asked to rate their current breastfeeding confidence on a scale of 1 to 5. A sample pre-discharge survey is shown in Appendix B. The participant then continued with discharge home. Between 1 and 2 weeks later, the project lead completed their breastfeeding support phone consultation.

Immediately after, a post-consult survey was administered, which also used a Likert Scale format. Participants were asked again to rate their breastfeeding confidence on a scale of 1 to 5, followed by two additional questions that asked if they received outside breastfeeding support and if they were still breastfeeding. A sample post-consult survey is shown in Appendix C.

Data Collection

Data collection was completed by the project lead. Participant responses were recorded on paper with an individual participant number and stored in a locked file cabinet located in the lactation office. Once the pre-discharge and post-phone consult surveys were both completed with all 40 participants, data was transferred into an Excel spreadsheet by the project lead. This file was kept on a locked computer with password-only access. Two participants did not complete their breastfeeding support phone call due to time constraints on the phone, so their data was incomplete and excluded. Six participants reported external breastfeeding support prior to their breastfeeding support phone call and were excluded. Data from 32 participants qualified for analysis. A data collection timeline can be found in Figure 3.

Data Analysis

This project aimed to complete a breastfeeding support phone call with at least 80% of first-time exclusive breastfeeding mothers discharged between June 1 and September 14, 2021. The number of participants who participated were compared to the total patient census of first-time exclusive breastfeeding mothers who were discharged during that time. Another project aim was to improve reported breastfeeding confidence in 100% of mothers who completed the postpartum breastfeeding support phone call. Participant responses from the pre-discharge survey and post-phone call survey were compared to identify any increase or decrease in reported confidence.

Results

Implementation

The implementation of this project took place during a time of immense growth within the Women's Services department at St. David's Georgetown Hospital. When senior leadership made the decision to re-start the lactation department in February of 2021, improving hospital exclusive breastfeeding rates and providing lactation care past discharge became two primary goals. Pediatric and obstetric providers were involved in these decisions and the goals of this QI project were shared at the OB Section meeting in April 2021. This project required a cultural change on the unit from promoting formula consumption to exclusive breastmilk. After the unit lost their lactation consultant in 2017, the cultural "norm" on the unit was to give formula. The exclusive breastmilk rate plummeted from 40% to 26%. When the leadership team hired a new IBCLC in February of 2021, strict goals were set related to breastmilk consumption and shared among staff. This created a culture shift among the unit. This was essential to the success of this project. Bi-weekly meetings between the project lead and director of Women's Services took place throughout implementation to review progress and adherence.

Outcomes

This project aimed to provide breastfeeding support phone calls to at least 80% of first-time breastfeeding mothers discharged from St. David's Georgetown Hospital between June and September of 2021. This was achieved, as 40 participants were included in the intervention which is 80% of the total 50 first-time breastfeeding mothers who were discharged during this time. This project also aimed to increase confidence in 100% of participants. Data analysis revealed 60% of participants reported an increase in confidence and that only 16% of participants received external breastfeeding support after discharge. This shows that 84% of first-time

mothers received no postpartum breastfeeding support between hospital discharge and 1 to 2 weeks postpartum. While the goal was not reached for 100% of participants to report an increase in confidence, 60% still demonstrates a large positive impact. Demographic data was not collected due to time constraints related to one individual completing the intervention, data collection, and analysis. Data analysis results are shown in Figure 4 and Figure 5

Discussion

The purpose of this project was to increase breastfeeding support and confidence in first-time mothers between one and two weeks postpartum through the completion of a breastfeeding support phone call with an International Board-Certified Lactation Consultant. (IBCLC). More specifically, this project had a measurable goal to improve confidence in 100% of participants, which was not obtained. Although only 60% of mothers reported an increase, the overall purpose of this project was achieved. There were not any large barriers to project completion, as designated time was provided to the project lead and patients were eager to receive the postpartum phone call.

When the goals of this project were shared at the pediatric and obstetric meeting last Spring, it received strong multidisciplinary support. Obstetric providers voiced excitement that their patients would be receiving follow-up before their standard six-week appointment in the clinic. All providers wanted to receive results when the project was completed. Senior leadership also voiced support for the project and the importance of providing exceptional care to every patient, as stated by the St. David's mission statement (St. David's Healthcare, 2021). This project is the beginning of a lactation program that aims to improve the care provided to the women of the Georgetown community.

The results of this project align with current research. Demirci et al. investigated how the implementation of tele-lactation services would impact the delivery of lactation support to postpartum mothers in rural communities and found that it increased maternal breastfeeding confidence (2018). While this project utilized phone consultation, this study sets the stage to expand into tele-health and possibly see an improvement in outcomes. Results demonstrate that breastfeeding support does not have to be in-person to improve maternal confidence. Haase et al. (2019) concluded in their literature review that IBCLC's play an important role in improving breastfeeding outcomes. Results from ten qualitative studies and two randomized-control trials revealed that IBCLC's improve breastfeeding outcomes including prevention of complications and improved duration, but that more research is needed on a global scale. With the project lead being an IBCLC and carrying out the intervention, this project aligns with the findings of Haase et al. (2019).

Limitations

The primary limitation of this study was the small sample size. The patient population is restricted to first-time exclusively breastfeeding mothers from a small labor and delivery unit. Carrying this project out at a larger facility would allow for a larger sample size. Another limitation is the lack of demographical data. Without this information, it is unknown if the results are from a diverse population or isolated to a specific race, age, or ethnicity. Lack of translation services was a limitation and did not allow for Spanish speaking patients to be included. Lastly, this project was limited to families who live in the Georgetown area, which is primarily suburban and sub rural. A small community hospital does not attract patients from a large geographical area, so results cannot be applied to families who live in urban or rural areas. Expanding this

project to a larger hospital or to other facilities to increase sample size would increase the validity of results as well.

Interpretation

This project followed the PDSA QI conceptual framework. All steps were followed, and the anticipated project timeline was met. During the planning phase, project goals were discussed and developed. Next steps in the act phase of PDSA included dissemination of results to senior hospital leadership. The goal of improving confidence in 100% of participants was not met, which warrants review of the intervention method and changes in the future. Proposed changes included utilizing telemedicine and including a feedback survey following the intervention. Financial implications for expanding this project would include associated costs with recruiting another IBCLC and nurse translator to assist with implementation and data collection. With the project lead seeing patients and completing this QI project, expanding project size would require additional staff. This could create a substantial financial strain on the unit.

Conclusions and Implications

This project displayed that completing a postpartum breastfeeding support phone call may increase maternal confidence. As an intervention that does not require any physical space, can be completed at any time during the day, and does not require advanced technology, the results of this project should be shared with other institutions. This project showed that support via phone has the potential to positively impact breastfeeding outcomes. Limited resources are required for these services, making it convenient. It also has the potential to increase patient satisfaction scores, although this was not analyzed in this project. This is an opportunity for future study. Within the organization, these results spark an opportunity to investigate how follow-up phone calls in other specialty areas may affect patient confidence with their post-

discharge self-care. Lastly, only 16% of participants reported receiving breastfeeding support aside from the intervention. This demonstrates a huge need for an increase in breastfeeding support for our families, especially first-time mothers. Further research is needed on how to best continue care past hospital discharge for this population, and how breastfeeding support phone calls impact breastfeeding exclusivity and duration.

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Appendix A

Phone Call Checklist

Phone Call Checklist
Completed on day _____ postpartum.
ID #: _____

- ☐ Review breastfeeding frequency of 8-12 times per 24hrs
- ☐ Review 5-6 wet and 3-5 dirty diapers today, and yellow seedy stool
- ☐ Review comfort measures for sore nipples including gels, expressed breast milk, and heat/ice
- ☐ Review signs of milk transfer including audible swallows, infant satiety, and breast relief with breastfeeding session
- ☐ Review latch techniques including nose to nipple, C-hold, and tummy to tummy
- ☐ Review nutrition, hydration, and hand hygiene
- ☐ Review cluster feeding and nighttime feeding
- ☐ Ask mother if she plans to pump, and if so, provide education on pumping schedule from Kellymom.com

Appendix B

Pre-discharge Survey

Participant#: _____

Rate your agreement with the following statements on a scale of 1 to 5.

1. Do Not Agree
2. Somewhat Do Not Agree
3. Neutral
4. Somewhat Agree
5. Strongly Agree

Reported Maternal Breastfeeding Confidence at Hospital Discharge

I feel confident breastfeeding my baby.

1. Do Not Agree
2. Somewhat Do Not Agree
3. Neutral
4. Somewhat Agree
5. Strongly Agree

Appendix C

Post-Consult Survey

Rate how much you agree with the following statements on a scale of 1 to 5.

1. Do Not Agree
2. Somewhat Do Not Agree
3. Neutral
4. Somewhat Agree
5. Strongly Agree

Reported Maternal Feeding Confidence after Postpartum Follow-up

I feel confident breastfeeding my baby.

1. Do Not Agree
2. Somewhat Do Not Agree
3. Neutral
4. Somewhat Agree
5. Strongly Agree

This phone call consultation increased my confidence with breastfeeding.

1. Do Not Agree
2. Somewhat Do Not Agree
3. Neutral
4. Somewhat Agree
5. Strongly Agree

Answer Yes or No to the following question:

Are you still breastfeeding?

Yes

No

Additional factors such as family, friends, books, or other modes of education increased my breastfeeding confidence after hospital discharge in addition to this consultation.

Yes

No

Figure 1

SWOT Analysis

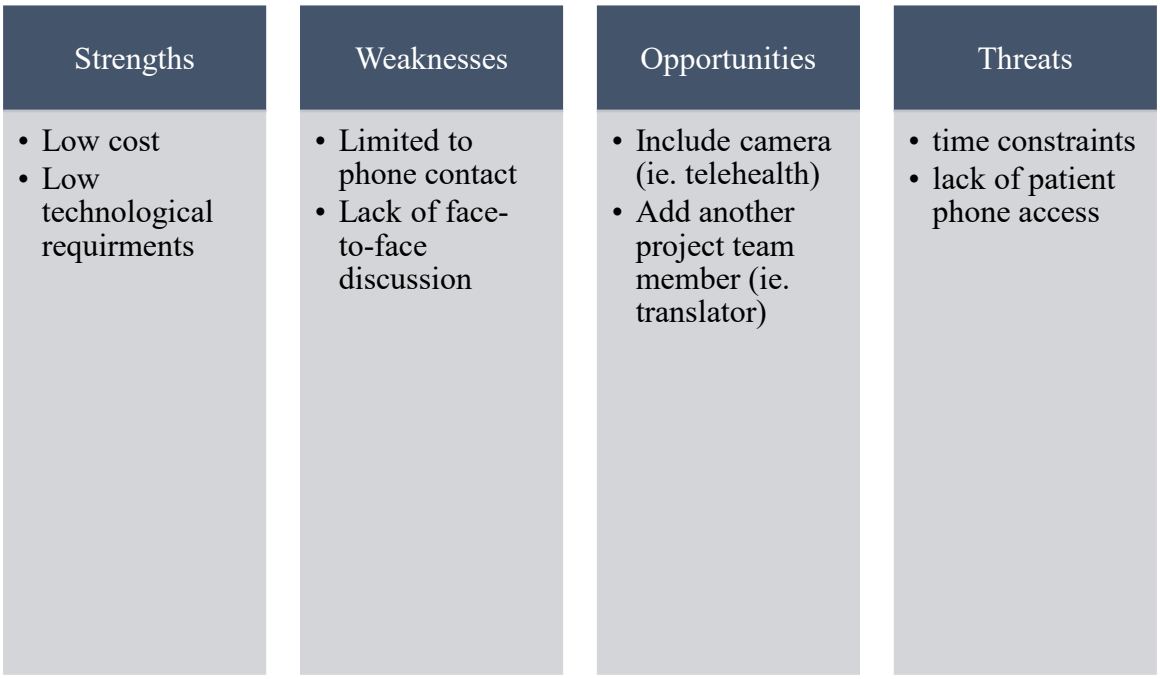

Figure 2

Intervention Timeline

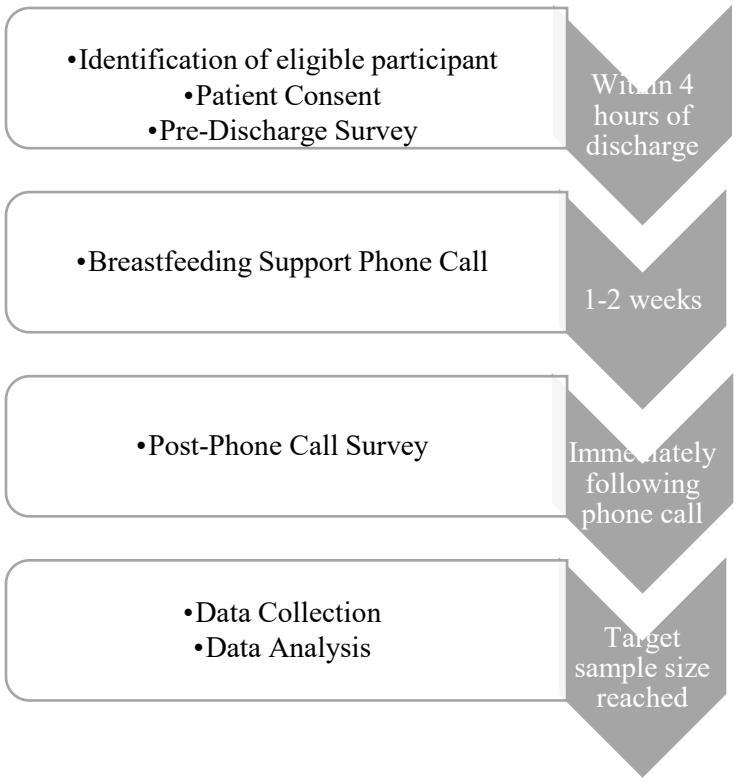

Figure 3

Data Collection Timeline

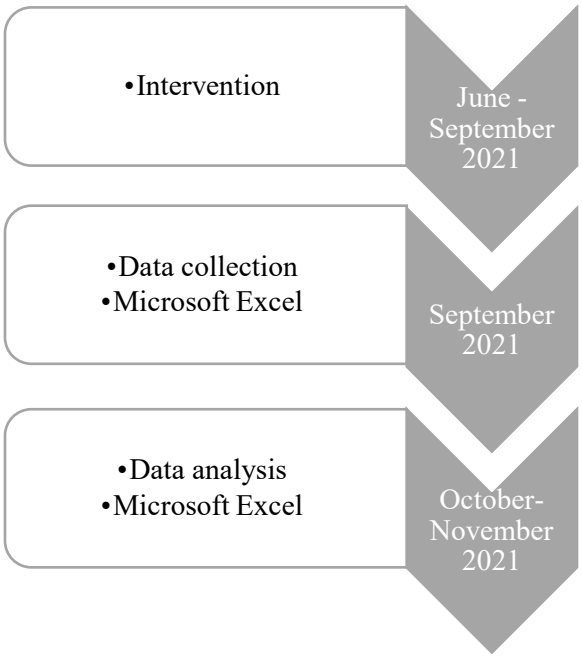

Figure 4

Reported Feeding Confidence After Postpartum Phone Call

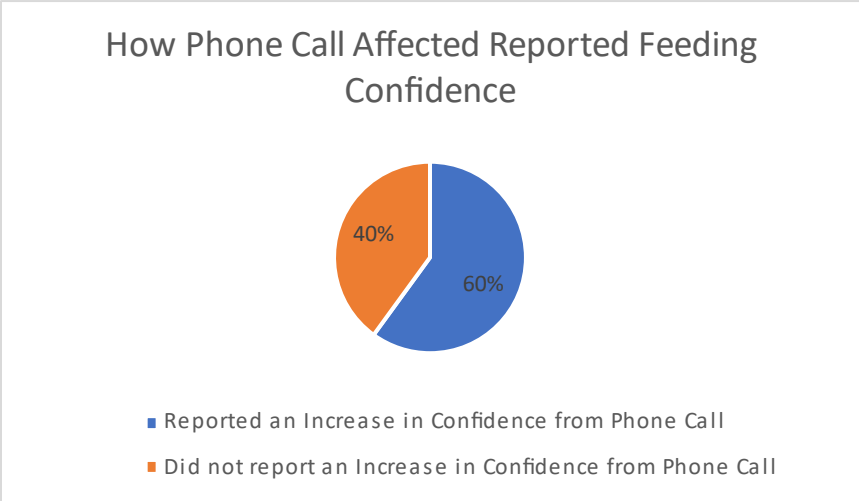

Figure 5

Participant Breastfeeding Assistance Post-Discharge