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## Effectiveness of Follow up Phone Calls on Postpartum Women After Discharge: A Program Evaluation

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Effectiveness of Follow up Phone Calls on Postpartum Women After Discharge:  
A Program Evaluation

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### **Effectiveness of Follow up Phone Calls on Postpartum Women After Discharge: A Program Evaluation**

During pregnancy, an expecting mother will have several prenatal visits to ensure that the mother and the fetus are healthy and progressing as expected. Even after birth, the first 48-72 hours are closely monitored to help prevent and treat any complications that may arise during this time. In most cases, a mother and her infant are discharged two to three days after birth and followed up with in six to eight weeks for their first postpartum visit. Postpartum complications that are common with cesarean births are postpartum hemorrhage, surgical site infections, and venous thromboembolism (Burke & Allen, 2020). Postpartum hypertension is also a common complication seen after giving birth. Hypertension is known to be peak around 3 to 6 days postpartum and can last up to 6 weeks after birth (Brown & Kransdorf, 2021). Although complications and challenges can develop during this postpartum period, postpartum functional recovery is rarely assessed after 72 hours and before the four to six weeks postpartum period (Komatsu et al., 2017).

An intervention that has been known to benefit patients in the transition from hospital to home after discharge has been follow-up phone calls (Woods et al., 2019). Follow up phone calls conducted by hospital staff have shown to provide aftercare advice, improve communication in exchanging information, aid in managing symptoms and complications, and act as a means to ease the transition from hospital to home (Mistiaen & Poot, 2006, as cited in Woods et al., 2019). Follow-up phone calls have also been a cost-effective way to improve patient satisfaction, improve patient health outcomes, and reduce readmissions (Gonçalves-Bradley et al., 2017; Hamar et al., 2017, as cited in Woods et al., 2019).

In January of 2020, the Mother/Baby Unit at a midwestern metropolitan hospital implemented the “call back” follow up call system, mothers that had been discharged from the unit. This call usually takes place between 2-5 days after discharge from the hospital. The “call

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back” follow up phone call system includes a series of questions that asks discharged patients about breastfeeding, the infant, the patient’s follow up appointment, reported symptoms, and mood/depression screening. This “call back” system was implemented several years ago and was conducted by non-clinical staff at the time. Due to the lack of attention and available staff at the time, it eventually was discontinued on the unit. In January 2020, leadership on the Mother/Baby unit decided to reimplement the “call back” program. Although it was the same concept as before, staff nurses now led the follow up phone calls and the questionnaire had evolved to meet the needs of the patients. Although it was reimplemented in January of 2020, the program became essential once Covid-19 was prevalent. Leadership on the Mother/Baby unit began to enforce the phone call interventions in order to follow up with patients and assess their needs during the pandemic and quarantine.

The purpose of this project was to evaluate the efficacy of the “call back” system used to follow up with postpartum mothers after discharge. The aim of this study was to evaluate the effects of follow up phone calls on postpartum women in the areas of follow up appointment attendance and continuation of breastfeeding 6 to 8 weeks (depending on mode of delivery) after discharge. The outcomes that were being measured are mothers that attended their postpartum follow up appointment after discharge and mothers that continued to breastfeed at 6 to 8 weeks (depending on mode of delivery) after discharge. The question asked is in postpartum women, what is the effect of the “call back” follow up phone call intervention on patient outcomes including attendance to follow up appointment and breastfeeding continuation compared to postpartum women who did not receive the follow up phone call intervention?

### **Review of the Literature**

A comprehensive literature review was conducted by searching the CINHALL, Medline, and PubMed databases. The keywords and phrases that were searched were “follow up phone calls or telephone follow up or phone intervention”, “breastfeeding”, “appointments or visits”,

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“postpartum care” and “patient education or patient teaching”. The publication range searched was from 2016-2021. Of the yielded results, 14 publications were chosen for the literature review. The articles included in this literature review focused on the effects of follow up phone call interventions on patient outcomes, breastfeeding, appointment compliance, and patient education or teaching. Topics that were excluded from this review include pediatric follow up interventions, psychiatric studies, and effects on 30-day readmission rates.

Several studies have shown that follow up phone calls made after discharge were efficient and beneficial to patient outcomes. Tackitt et al. (2016) conducted a quality improvement study that analyzed if nurse practitioner led post-operative phone calls made 24-48 hours after discharge decreased the amount of emergency room visits and nurse advice line calls made after ureteroscopic stone surgery. They found that routine calls made to these patients are important, beneficial, and effective in improving cost effective care in all areas of care (Tackitt et al., 2016). Two articles in this review identified the benefit of follow up phone calls with management of disease or medication (Antonoff et al., 2016; Patel et al., 2017). Health Quality Ontario (2017) did a literature review on the effectiveness of early follow up phone calls made seven days and 30 days post discharge of heart failure and COPD patients. This literature review

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found that calls made at both times compared to standard care or no follow up were associated with a reduced risk of all-cause readmission, emergency department visits, and mortality (Health Quality Ontario, 2017). Although this information was beneficial, the literature review states that evidence was of low quality (Health Quality Ontario, 2017).

Casey et al. (2017) conducted a study that looked at the effects of nurse-led follow up phone calls with prostate cancer patients. This large longitudinal study found that these phone calls were effective and that they led to patient satisfaction when conducted over a 10-year time period (Casey et al., 2017). However, another study identified in a literature review did not notice any improvement in patient satisfaction when follow up phone calls were conducted with discharged oncology patients but showed that it did identify medication-related problems that were reported by patients (Salmany et al., 2017).

Follow up phone calls have been identified as a beneficial intervention for breastfeeding postpartum mothers after discharge. Adib-Hajbagher and Hashemi-Demneh (2018) concluded in a study that follow up phone calls positively affects the mother's attitude towards breastfeeding. Another study showed that postpartum mothers who had preterm infants discharged from the NICU and had received follow up phone calls, felt empowered, more supported, and less stressed about breastfeeding (Ericson et al., 2017). They also found that these mothers felt more valued and felt like "good mothers" by having the support and resources of the call back system available to them (Ericson et al., 2017). Khresheh et al. (2011) conducted a randomized control trial that showed postnatal education sessions and follow up

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phone calls made to mothers up to 2 to 4 months postpartum increased their knowledge on breastfeeding, but it did not increase the duration that the infant was breastfed. Efrat et al. (2015) performed a randomized control study that assessed the effects of a phone-based breastfeeding intervention on low-income Hispanic women in the United States. This study was the first randomized controlled trial (RCT) study to evaluate the effectiveness of postpartum care entirely via phone in this population (Efrat et al., 2015). This study found that the intervention did not increase the initiation of breastfeeding, but it improved the quantity and duration of breastfeeding in this population (Efrat et al., 2015).

When searching the literature, many articles were found that looked at the effects of automated appointment reminders on follow up appointment adherence but not on questionnaire styled phone calls from medical staff. Two articles identified in this literature review show an increase in follow up appointments attendance when patients were called prior to their follow up appointment (Hendrickson et al., 2020; Kumtheke & Johnson, 2018). Hendrickson et al. (2020) found that follow up phone calls received by patient's post-discharge from a level 1 trauma center increased follow up appointment attendance by assessing the patient's psychosocial needs, knowledge of follow up appointment, and possible barriers to making it to their follow up appointment. Kumtheke & Johnson (2018) studied the effects of phone call reminders for follow up appointments. This study found that a phone call reminder improved appointment adherence in an underserved Lupus clinic, which also contributes to the improvement of the overall outcome of the Lupus population (Kumtheke & Johnson, 2018). Although both automated reminders and phone call

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reminders were both beneficial, phone calls made by clinical staff added more importance to the call than the automated reminders (Kumtheke & Johnson, 2018).

Positive correlations have been seen between follow up phone calls and patient education and teaching. Crannage et al. (2019) conducted a study that looked at the effects of a discharge

medication education program via telephone that allowed for a pharmacist to follow up with patients and assess their knowledge (and reeducate if necessary) on the medications that they were prescribed prior to discharge. They found that the follow up phone calls increased patient satisfaction and decreased readmission rates (Crannage et al., 2019). Najafi Ghezelijeh et al. (2017) mentioned that self-management education based follow up phone calls and mobile phone based social networking influenced self-management behaviors among patients with hypertension which improved patient outcomes.

Limitations of this literature review were that most of the studies were small and of different populations. Different populations included patients with lupus, hypertension, post-surgery, and medical patients. Another limitation of this literature review is that some articles included the follow up intervention in combination with another intervention that served the same purpose. This made it difficult to see the true effectiveness of the intervention without it being complimented by other factors and interventions introduced by the researcher. Although the information was informative and useful, there were gaps in the literature that focus on the postpartum women population.



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The Program Performance and Evaluation Office (PPEO) program evaluation is the framework that was used for this project. This type of framework is used for program evaluations. This systematic approach of following specific steps and standards allows you to understand the program's context and focus on the ongoing evaluation strategies that involve program stakeholders (Program Performance and Evaluation Office, 2019). There are six steps in the program evaluation framework. These six steps include engaging stakeholders, describing the program, focus the evaluation design, gather credible evidence, justify conclusions, and ensure use and share lessons learned (Program Performance and Evaluation Office, 2019).

The first step included engaging the stakeholders (Program Performance and Evaluation Office, 2019). This step helps you to identify the individuals or the organization that are invested in this program, would benefit from the results of this evaluation, and have input on what would be done with the results of this evaluation (Program Performance and Evaluation Office, 2019). In this project, the stakeholders were the Mother/Baby nursing staff, discharged postpartum patients, and the department leadership team. In order to engage these stakeholders, a line of communication was established via in-person, email, and telephone. Discussions and brainstorming also occurred with the unit leadership team in order to determine the need and most beneficial way of performing this program evaluation. The information we decided to focus on was the program's effectiveness on breastfeeding continuation and follow up appointment attendance.

The second step included describing the program using the logic model (Program Performance and Evaluation Office, 2019). The logic model is depicted in 6

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categories. These categories include inputs, activities, outputs, outcomes, and modulators (Program Performance and Evaluation Office, 2019) (See Appendix B).

The third step was to focus on the design of this evaluation. This step is broken down into four clusters: utility (who needs and will use the information from this evaluation), feasibility (cost, time, effort), propriety (who needs to be involved), and accuracy (what design will give the most accurate information) (Program Performance and Evaluation Office, 2019). The parties that will be informed of the results of this program evaluation are the Mother/Baby department leadership/management team. No additional cost was needed for this evaluation, but time and effort were needed to evaluate and retrieve information from the EHR. The nursing staff, leadership/manager, UMSL IRB, and the organization IRB was

The last three steps of this program evaluation included gathering credible evidence, justifying the conclusions, and ensuring that the information obtained was used and learned from (Program Performance and Evaluation Office, 2019). Gathering credible evidence included gathering data and/or information beneficial and trustworthy to stakeholders such as the difference in appointment attendance and breastfeeding continuation between the two groups (Program Performance and Evaluation Office, 2019). Once this data was obtained, it was justified by using five elements: standard of values, data analysis/synthesis, systemic interpretation, and comparison of relevant standards for judgment and recommendations (Program Performance and Evaluation Office, 2019). To ensure that the information was used and learned from, the last steps focused on design, preparation, feedback, follow-up and dissemination (Program Performance and Evaluation Office, 2019). By evaluating

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the “call back” follow up phone call program, we were able to assess its efficacy in the postpartum population and ensure that patients are getting the optimal benefit of the program and improve patient outcomes. These last three steps are described in the methods section.

## Methods

### Design

This project is a program evaluation of the follow up call system that was implemented in January 2020 at a midwestern metropolitan hospital. This descriptive study design evaluated the efficiency of the follow-up call program and provided information regarding its effects on follow up appointment adherence and continuation of breastfeeding at 6 to 8 weeks (depending on mode of delivery) after discharge. Randomized retrospective data from October 2019 (before follow-calls began) and October 2020 (after follow up phone calls began) was included in this evaluation. **Setting**

This project took place on the Mother/Baby floor at a high-risk maternity, midwestern metropolitan hospital that averages 200-250 deliveries per month. This unit contains 28 bed/individual patient rooms. This is a teaching hospital staffed by several residents, six high risk attendings, 5 low risk attendings, two nurse practitioners, and a midwife. The obstetric unit houses patients from the WISH clinic, which specializes in pregnant women who diagnosed with drug and alcohol abuse.

### Sample

Random sampling included postpartum women discharged from the Mother/Baby unit. Subjects were chosen using a generated random chart of numbers. Subjects included postpartum women over the age of 18 who experienced vaginal or cesarean deliveries. This study excludes postpartum patients discharged from the

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antepartum unit or other units in the hospital (ICU, PISCU, or medical surgical). This study also excluded patients that were missing data in the electronic medical record that includes information regarding breastfeeding status. Women who have experienced fetal demise, received no prenatal care, and those who receive pre- and post-natal care outside of the network were also excluded from this study. The pre-intervention sample size included 50 patients from before the follow-up phone calls were implemented. The post-intervention, after implementation of follow-up phone calls, sample size was also 50 patients. The overall sample size for follow-up phone calls was of 100 patients that meet inclusion criteria. The sample size was different for the breastfeeding population since not all the postpartum women started breastfeeding initially. The sample size for the pre-intervention group for breastfeeding continuation at 6-8 weeks postpartum was 31 postpartum patients. The sample size for the post-intervention group for breastfeeding continuation at 6-8 weeks postpartum was 32 postpartum patients.

## **Approval Process**

Administration approval was obtained in September of 2020 mother/baby unit. Approval was also acquired from the UMSL Institutional Review Board (IRB) and the facility Institutional Review Board. De-identified data was used in this retrospective study by using unidentifiable labels and no patient names, birthdates, or medical record numbers used. Information was protected by being compliant with HIPPA regulations and secured on a password locked laptop.

## **Data Collection/Analysis**

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Retrospective data was collected by using information provided by the patient's electronic health record (EHR). Data collected from October 2019 represented patient information obtained prior to the follow-up phone call intervention. Patient data collected in October 2020 represented patient information analyzed post-implementation of the follow up phone calls. This data represents the timeframe of 6 to 8 weeks (depending on mode of delivery) after discharge. The demographic data that was collected included race, age, mode of delivery (vaginal or cesarean), and multipara/primipara. The variables measured were attendance at postpartum follow up appointment after discharge and continued to breastfeed 6-8 weeks after discharge. An excel spreadsheet was used to store data. Most of this information was EHR.

Data was analyzed using descriptive statistics to describe the age, ethnicity/race, mode of delivery, and multipara/primipara of the two groups and the overall sample. Differences between the two groups were evaluated using the Chi Square statistic for categorical variables (breastfeeding and appointment attendance). A T-test was used to determine the mean and standard deviation of the age represented between the two groups. The data analysis tool that was used for this project was Intellectus Statistics Software.

### **Procedures**

Key stakeholders for this program evaluation were the Mother/Baby nursing staff, discharged postpartum patients, and the department leadership team. The unit team leader that chose to implement this program, identified the need and interest in this program evaluation and stated that they would like to see the effects of this

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program on follow up appointment attendance and breastfeeding. In addition to the need and interest expressed by the unit team leader, questions or topics chosen for this evaluation were also identified using the “callback” flowsheet located in the electronic medical record which is used by the staff nurses to document the information from the call. The flowsheet is located in the EPIC database and is obtained by logging into a password protected hospital computer. This flowsheet was examined to determine what areas of the discharge follow up phone call questions and areas would be focused on for this program evaluation. A logic model was then developed to describe the process and identify the steps needed to develop this program evaluation (See Appendix B).

The design of a retrospective study was then determined to display the impact of this program on breastfeeding and follow up appointment attendance. Patient specific electronic medical records were analyzed for the month of October 2019 and October 2020. A data collection tool was developed and used when examining the EHR (Appendix C & D).

Retrospective data from October 2019 and October 2020 was then an Excel spreadsheet and analyzed using the Intellectus statistics software.

Charts were identified randomly from a list of patients that were discharged from the Mother/Baby floor in October 2019 and 2020 from the Epic database by using a generated random numbers chart. Fifty 3-digit numbers between 1 and 250 were the random numbers chart. The selected numbers represented the charts to be chosen from the list of discharged patients listed in the epic database. These individual charts were then reviewed to identify any data that will cause the patient’s chart to be excluded

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such as age, primary doctor/clinic, delivery summary (identifying fetal demise or living), and age. Charts that met the exclusion criteria were excluded and additional charts were reviewed using the random chart of numbers method again until the desired sample size was acquired. Exclusion criteria includes postpartum patients that were discharged from the antepartum unit or other units in the hospital (ICU, PISCU, med surg), women who have experienced fetal demise, received no prenatal care, charts containing missing data pertaining to breastfeeding status, and those who receive pre- and post-natal care outside of the network. Once 50 charts are obtained, data will then be collected and recorded on a spreadsheet that will be stored on a password protected hospital computer. HIPPA guidelines will be followed, and no linking data was identified.

## Results

### Descriptive Statistics

Data was analyzed using descriptive statistics to describe age, race, mode of delivery, and gravida/para. Table 2 shows the frequencies and percentages that were calculated for each nominal variable represented in the population that did not receive follow-up phone calls after discharge (Pre-Intervention). The most frequently observed category of mode of delivery was vaginal ( $n = 41, 82.00\%$ ). The most frequently observed category of race was African American ( $n = 37, 74.00\%$ ). The most frequently observed categories of gravida/para were G3P1 and G2P1, each with an observed frequency of 8 (16.00%). The observations for age had an average of 28.80 (SD = 6.06).

Table 2 shows the frequencies and percentages that were calculated for each nominal variable represented in the population that did receive follow-up phone calls

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after discharge (post-intervention). The most frequently observed category of mode of delivery was Vaginal ( $n = 38, 76.00\%$ ). The most frequently observed category of race was African American ( $n = 32, 64.00\%$ ). The most frequently observed category of gravida/para was G1P1 ( $n = 15, 30.00\%$ ). The observations for age had an average of 28.20 ( $SD = 6.67$ ) (see Appendix D).

### **Breastfeeding**

A Chi-square test was conducted to examine whether breastfeeding at 6 to 8 weeks was equally distributed between the pre-intervention group ( $n=15$ ) and the post intervention group ( $n=16$ ). The results of the test were not significant based on an alpha value of .05, ( $\chi^2(1) = 0.03, p = .857$ ), indicating that the null hypothesis stating that continuation of breastfeeding at 6 to 8 weeks among the two groups is equally distributed cannot be rejected. (see Table 3 within Appendix E).

### **Follow Up Appointment Attendance**

A Chi-square test was conducted to examine whether follow up appointment attendance was equally distributed between the pre-intervention group ( $n=27$ ) and the post intervention group ( $n=29$ ). The results of the test were not significant based on an alpha value of .05, ( $\chi^2(1) = 0.07, p = .789$ ), indicating the null hypothesis (the pre and post group frequencies are equally likely) cannot be rejected (See Table 4 within Appendix E).

## **Discussion**

The purpose of this project was to evaluate the efficacy of the “call back” system



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used to follow up with postpartum moms after discharge. The two variables being measured are follow up appointment attendance and continuation of breastfeeding at 6 to 8 weeks (depending on mode of delivery) after discharge. The question asked was that in postpartum women, what is the effect of the “call back” follow up phone call intervention on patient outcomes including attendance to follow up appointment and breastfeeding continuation compared to postpartum women who did not receive the follow up phone call intervention? Retrospective data from October 2019 and October 2020 was collected and analyzed between 100 postpartum women total. October 2019 represents postpartum moms that did not receive follow up phone calls after discharge and October 2020 represents postpartum moms that did receive follow up phone calls after discharge.

According to the data analysis conducted during this project, there was no significant difference in follow up appointment attendance with postpartum women in October 2019 (pre-intervention) and October 2020 (post-intervention). In October 2019, 27 women from a sample size of 50 women attended their follow up appointment. In October 2020, 29 women from a sample size of 50 attended their follow up appointment. Although, an increase in attendance was observed, it was not significant enough to conclude that follow up phone calls increased follow up appointment attendance. A study mentioned in the literature review showed that follow up phone calls and/or appointment reminders significantly increased follow up appointment clinic attendance with trauma patients (Hendrickson et al., 2020). They did so by addressing the barriers and emotional needs of the patients that could hinder them from going to their follow up appointment (Hendrickson et al., 2020). These findings may indicate the need for education on the importance of attending follow up appointments for postpartum moms. Trauma patients may be more inclined to attend follow up clinic visits because of the severity of their previous condition. However, some postpartum women may not feel the urgency of attending a follow up visit if they feel that nothing is wrong.

When looking at the data collected for the continuation of breastfeeding 6 to 8

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weeks postpartum, there was no significance in the number of postpartum women that continued to breastfeed prior to receiving follow up phone calls (October 2019) or after receiving follow up phone calls (October 2020). The pre-intervention group showed a result of 15 women that continued to breastfeed 6 to 8 weeks postpartum and 16 women did not continue to breastfeed. The post intervention group showed that 16 women continued to breastfeed 6 to 8 weeks postpartum and 16 stopped breastfeeding. This could be due to many barriers that may affect each individual's experience with breastfeeding such as milk supply, physical anatomy, working mothers, and family/partner support. Although, this data shows no significant correlation between breastfeeding continuation and follow up phone calls, follow up phone calls may still be beneficial in providing support and feedback for the mothers that are still breastfeeding at 6 to 8 weeks postpartum. As mentioned in the literature review, studies have shown that follow up calls may not increase the longevity of breastfeeding for some women but it can provide support, empowerment, and overall knowledge of breastfeeding (Khresheh et al.,2011).

This project did have some limitations that developed during the data collection process. One of the limitations being that some of the postpartum women in the project were not breastfeeding initially. Due to this, the sample size for breastfeeding women in this study was smaller than expected. Another limitation was the chart review for the follow up attendance. There is a possibility that a patient may have went to see a provider at another entity and that visit would not be represented in the electronic chart that was accessible for this project.

Another possible barrier that could have an effect on follow up appointment attendance and breastfeeding continuation was the impact of the COVID-19 virus. During this time, there was a nationwide shut down that required individuals to be in quarantine. Most healthcare providers performed virtual visits and/or saw patients via telehealth. However, these postpartum patients were scheduled to be seen in person to due medical

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reasons such as a blood pressure checks, incision checks, or wound care. There were also limited resources such as lack of in person classes/support groups, transportation availability, and a reduction in healthcare staffing. Because of these limited resources, patients may have difficult time finding transportation for doctors' appointments, finding support groups for breastfeeding, and/or acquired fear of leaving the house or going to the doctor with a newborn baby in hopes to avoid catching the Covid-19 virus.

Mehrotra et al (2021) found that weekly visits in 2020 was on average 5-6% below the typical pattern, which implied that there was a cumulative decline in visits across the United States. Obstetrics and Gynecology in particular showed a 10% decline in visits during the Covid-19 pandemic (Mehrotra et al., 2021). At this particular facility, no decrease or decline in follow up visits or breastfeeding was observed and therefore we could imply that this data shows a clinical significance.

Breastfeeding and follow up appointment attendance were measured during this project but there are other outcome measures that could show how effective follow up phone calls can be for postpartum women. These other outcome measures include teaching/education need, patient satisfaction, and identifying common barriers that affect this population at this particular hospital. It may also be beneficial to look into the effect that follow up phone calls have on postpartum readmissions.

## Conclusion

Follow up phone calls did not significantly increase appointment attendance or breastfeeding continuation at 6 to 8 weeks postpartum. However, follow up phone calls did still provide some type of benefit even though it was not the one expected. Breastfeeding mothers may not be breastfeeding longer but they may have a better experience with breastfeeding due to the support and knowledge that follow up phone calls may provide. I recommend continuing follow up phone calls and

utilizing the results of this project to recognize areas for improvement and growth.

### References

- Adib-Hajbaghery, M., & Hashemi-Demneh, T. (2017). Effect of telephone follow-up on postdelivery breastfeeding and maternal attachment. *Journal of Nursing & Midwifery Sciences*, 4(4), 117–124. [https://doi-org.ezproxy.umsl.edu/10.4103/JNMS.JNMS\\_6\\_18](https://doi-org.ezproxy.umsl.edu/10.4103/JNMS.JNMS_6_18)
- Antonoff, M. B., MD, Ragalie, W., MD, Correa, A. M., PhD, Spicer, Jonathan D., MD, PhD, Sepesi, B., MD, Roth, J. A., MD, . . . Mehran, R. J., MD. (2016). Results of post discharge nursing telephone assessments: Persistent symptoms common among pulmonary resection patients. *The Annals of Thoracic Surgery*, 102(1), 276-281. doi:10.1016/j.athoracsur.2016.01.062
- Brown, L. E., & Kransdorf, L. N. (2021). When to Call HELLP (Hemolysis, Elevated Liver Enzymes, and Low Platelet Count): Hypertension in the Postpartum Period. *Journal of Women's Health* (15409996), 30(1), 14–16. <https://doi-org.ezproxy.umsl.edu/10.1089/jwh.2020.8572>
- Burke, C., & Allen, R. (2020). Complications of Cesarean Birth Clinical Recommendations for Prevention and Management. *MCN: The American Journal of Maternal Child Nursing*, 45(2), 92–99. <https://doi-org.ezproxy.umsl.edu/10.1097/NMC.0000000000000598>
- Casey, R., Powell, L., Braithwaite, M., Booth, C., Sizer, B., & Corr, J. (2017). Nurse-led phone call follow-up clinics are effective for patients with prostate cancer. *Journal of Patient Experience*, 4(3), 114-120.

doi:10.1177/2374373517706613

Crannage, A.J., Hennessey, E.K., Challen, L.M., Stevens, A.M., Berry, T.M. (2020)

Implementation of a discharge education program to improve transitions of care for patients at high risk of medication errors. *Ann Pharmacother.* 2020 Jun;54(6):561-566. doi: 10.1177/1060028019896377. PMID: 31868004

Efrat, M. W., Esparza, S., Mendelson, S. G., & Lane, C. J. (2015). The effect of

lactation educators implementing a telephone-based intervention among low-income Hispanics: A randomized trial. *Health Education Journal*, 74(4), 424–441. <https://doi.org/10.1177/0017896914542666>

Ericson, J., Flacking, R., Udo, C. (2017) Mothers' experiences of a telephone based

breastfeeding support intervention after discharge from neonatal intensive care units: a mixed-method study. *International Breastfeeding Journal*. doi: 10.1186/s13006-017-0142-9. PMID: 29270208; PMCID: PMC5735875.

Health Quality Ontario (2017). Effect of early follow-up after hospital discharge on

outcomes in patients with heart failure or chronic obstructive pulmonary disease: A systematic review. *Ontario Health Technology Assessment Series*, 17(8), 1–37

Hendrickson, S. B., Simske, N. M., DaSilva, K. A., & Vallier, H. A. (2020).

Improvement in outpatient follow-up with a post discharge phone call intervention. *Journal of the American Academy of Orthopedic Surgeons*, 28(18), e815–e822. <https://doi-org.ezproxy.umsl.edu/10.5435/JAAOS-D-19-00132>

Intellectus Statistics [Online computer software]. (2022). Intellectus Statistics.

<https://analyze.intellectusstatistics.com/>

Khresheh, R., Suhaimat, A., Jalamdeh, F., & Barclay, L. (2011). The effect of a postnatal education and support program on breastfeeding among primiparous women: A randomized controlled trial. *International Journal of Nursing Studies*, 48(9), 1058–1065. <https://doi->

[org.ezproxy.umsl.edu/10.1016/j.ijnurstu.2011.02.001](https://doi-org.ezproxy.umsl.edu/10.1016/j.ijnurstu.2011.02.001)

Komatsu, R., Carvalho, B., & Flood, P. D. (2017). Recovery after nulliparous birth: A detailed analysis of pain analgesia and recovery of function. *Anesthesiology (Philadelphia)*, 127(4), 684-694. doi:10.1097/ALN.0000000000001789

Kumthekar, A., & Johnson, B. (2018). Improvement of appointment compliance in an underserved lupus clinic. *BMC Health Services Research*, 18(1), N.PAG.

<https://doi->

[org.ezproxy.umsl.edu/10.1186/s12913-018-3429-7](https://doi-org.ezproxy.umsl.edu/10.1186/s12913-018-3429-7)

Mehrotra, A., Chernew, M.E., Linetsky, D., Hilary, H., Cutler, D.M., Schneider,

E.C.(2021). The Impact of COVID-19 on Outpatient Visits in 2020: Visits Remained Stable, Despite a Late Surge in Cases (Commonwealth Fund).

<https://doi.org/10.26099/bvhf-e411>

Najafi Ghezeljeh, T., Sharifian, S., Nasr Isfahani, M., Haghani, H. (2018) Comparing the effects of education using telephone follow-up and smartphone-based social networking follow-up on self-management behaviors among patients with hypertension. *Contemporary Nurse*. 54(4-5):362-373. doi:

10.1080/10376178.2018.1441730. Epub PMID: 29451091

Patel, S. D., Nguyen, P. A. (., Bachler, M., & Atkinson, B. (2017). Implementation of

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post discharge follow-up telephone calls at a comprehensive cancer center.

*American Journal of Health-System Pharmacy*, 74 Suppl 2(11 Supplement 2), S42-S46. doi:10.2146/ajhp160805

Program Performance and Evaluation Office (2019) *Center for Disease Control and Prevention*.

Retrieved from <https://www.cdc.gov/eval/framework/index.htm>

Salmany, S. S., Ratrout, L., Amireh, A., Agha, R., Nassar, N., Mahmoud, N., Rimawi, D., & Nazer, L. (2018). The impact of pharmacist telephone calls after discharge on satisfaction of oncology patients: A randomized controlled study. *Journal of Oncology Pharmacy Practice*, 24(5), 359–364. <https://doi-org.ezproxy.umsl.edu/10.1177/1078155217709616>

Tackitt, H. M., Eaton, S. H., & Lentz, A. C. (2016). Nurse-initiated telephone follow up after ureteroscopic stone surgery. *Urologic Nursing*, 36(6), 283-288. doi:10.7257/1053- 816X.2016.36.6.283

Woods, C. E., Jones, R., O’Shea, E., Grist, E., Wiggers, J., & Usher, K. (2019). Nurse-led post- discharge telephone follow-up calls: A mixed study systematic review. *Journal of Clinical Nursing*, 28(19-20), 3386-3399. doi:10.1111/jocn.1

<b>CITATION</b> Author(s), Date, Title, Journal Information, doi	<b>PURPOSE / BACKGROUND</b> Purpose & Outcome Measures or Goals (Aims)	<b>PARTICIPANTS / SETTING</b> Sample & Setting	<b>METHODS / DESIGN</b> Study Design & Interventions	<b>RESULTS / LIMITATIONS / RECOMMENDATIONS</b> Results, Strengths/Weaknesses, Limitations, & Recommendations
Adib-Hajbaghery, M., & Hashemi-Demneh, T. (2017). Effect of telephone follow-up on postdelivery breastfeeding and maternal attachment. <i>Journal of Nursing &amp; Midwifery Sciences</i> , 4(4), 117–124. <a href="https://doi-org.ezproxy.umsl.edu/10.4103/JNMS.JNMS_6_18">https://doi-org.ezproxy.umsl.edu/10.4103/JNMS.JNMS_6_18</a>	Assess the impact of postpartum telephone follow-up on breastfeeding and maternal attachment.	A clinical trial was conducted on 120 mothers who had a delivery at Alborz Hospital of Karaj during the spring of 2014.	Mothers were randomly assigned into three groups of 40. The groups one and three received breastfeeding training (BFT) and the groups one and two received telephone follow-up. Data were collected using a questionnaire. All groups had a pretest and a posttest on their knowledge, attitude, and performance toward breastfeeding. Mothers' attachment to their newborn was assessed at the end of the study.	The breastfeeding training plus telephone follow-up could increase the mothers' scores in breastfeeding. This study had some limitations that may limit the generalizability of the results. More studies with larger sample size and more extended follow-up and replicating the study and assessing the effect of breastfeeding and its duration on maternal attachment and vice versa is suggested.
Antonoff, M. B., MD, Ragalie, W., MD, Correa, A. M., PhD, Spicer, Jonathan D., MD, PhD, Sepesi, B., MD, Roth, J. A., MD, . . . Mehran, R. J., MD. (2016). Results of post discharge nursing telephone assessments: Persistent symptoms common among pulmonary resection patients. <i>The Annals of Thoracic Surgery</i> , 102(1), 276-281. doi:10.1016/j.athoracsur.2016.01.062	Characterize dominant concerns of pulmonary resection patients after discharge and to elucidate any relevant risk factors for their development.	Patients who underwent pulmonary resection over a 12-month period at a single institution.	Records of post discharge telephone calls were reviewed, and data collected pertaining to complaints requiring counseling over the phone or escalation to higher care level. Demographic, operative, and hospital data were examined by multivariate analyses to assess predictors of need for counseling or escalation of care.	Patient complaints after pulmonary resection were frequent, with most problems resolved by telephone counseling. As only 47.2% of discharged patients were reached for assessment of post discharge needs, it is possible that a higher response rate might have revealed subtle differences in patient symptoms and concerns. The lack of adherence to the protocol was identified as insufficient nursing staffing to perform the telephone calls in addition to inpatient care responsibilities. Despite highly prevalent concerns, predictors of need for counseling or care escalation were not identified, suggesting ongoing utility in the practice of telephoning all patients.
Casey, R., Powell, L., Braithwaite, M., Booth, C., Sizer, B., & Corr, J. (2017).	Assess patients with stable prostate cancer using regular telephone-based clinical	Since May 2004 to May 2014, a total of 815 patients have been referred to the urology cancer	815 patients were recruited for the nurse-led stable prostate cancer telephone follow-up	This study found that This service can be delivered in a high volume nurse-led service,



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<p>Nurse-led phone call follow-up clinics are effective for patients with prostate cancer. <i>Journal of Patient Experience</i>, 4(3), 114-120. doi:10.1177/2374373517706613</p>	<p>assessment and prostate-specific antigen (PSA) as a surrogate for clinic attendance. Also to assess whether patients were satisfied with phone call follow-up assessment.</p>	<p>clinical nurse specialist for the stable prostate cancer telephone follow-up service.</p>	<p>service. A convenience sample was selected for postal questionnaire assessment of their satisfaction.</p>	<p>with high levels of patient satisfaction, as an innovative service development. This study is the biggest of its kind currently published in the world literature with a clinical cohort of 3683 assessments on 815 patients. However, the postal questionnaire was administered by the nurse who carried out the phone follow-up, thus potentially causing response bias. Secondly, there is no objective assessment of patient anxiety or satisfaction using a standardized, validated questionnaire as used in some studies. Finally, this study had no comparator groups; however, there has previously been a study that did randomize patients to outpatient review versus nurse-led follow-up that answers this question</p>
<p>Crannage, A.J., Hennessey, E.K., Challen, L.M., Stevens, A.M., Berry, T.M. (2020) Implementation of a Discharge Education Program to Improve Transitions of Care for Patients at High Risk of Medication Errors. <i>Ann Pharmacother</i>. 2020 Jun;54(6):561-566. doi: 10.1177/1060028019896377. PMID: 31868004</p>	<p>The objective of this study was to develop and evaluate a discharge education service bridging the inpatient and outpatient setting to increase successful patient contact points during the transitions of care process from hospital to home.</p>	<p>A total of 50 patients were included in the initial evaluation of this service.</p>	<p>This prospective, single-centered observational study examined the impact of a discharge medication education program on successful telephone follow-up contact. The primary outcome was the percentage of high-risk patients educated at hospital discharge who were successfully reached via follow-up telephone contact within 2 business days of discharge.</p>	<p>78% of patients were successfully contacted within 2 business days after discharge, an increase from a 20% success rate prior to service implementation. At follow-up telephone calls, patients reported taking an average of 16 medications. The 30-day readmission rate was 10% for patients receiving this service, compared with 19% prior to implementation. When asked if they understood the medication component of their care and if they found the TOC service to</p>

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				be satisfactory, 100% and 96% of patients strongly agreed or agreed with these
Efrat, M. W., Esparza, S., Mendelson, S. G., & Lane, C. J. (2015). The effect of lactation educators implementing a telephone-based intervention among low-income Hispanics: A randomized trial. <i>Health education journal</i> , 74(4), 424–441. <a href="https://doi.org/10.1177/0017896914542666">https://doi.org/10.1177/0017896914542666</a>	To assess whether a telephone-based breastfeeding intervention delivered by lactation educators influenced exclusive breastfeeding rates among low-income Hispanic women in the USA.	Pregnant low-income Hispanic women (298) were recruited from community health clinics in Los Angeles County (USA) and randomly assigned to either a control or an intervention group.	Randomized two-group design. Data relating to the factors associated with breastfeeding were collected during the third trimester. Breastfeeding outcome data were collected at 72 hours, 1 month, 3 months and 6 months postpartum.	Findings from this study suggest that telephone-based breastfeeding interventions delivered by a lactation educator show promise as a cost-effective strategy for improving both the quantity and the duration of breastfeeding among low-income Hispanic women in the USA.
Elkins, K. & Branson, P. (2015) Correlation between follow-up phone call post discharge and patient satisfaction scores. <i>American Heart Association</i> . Retrieved from <a href="https://www.ahajournals.org/doi/10.1161/str.46.suppl_1.wp347">https://www.ahajournals.org/doi/10.1161/str.46.suppl_1.wp347</a>	The purpose of the phone calls was to assess understanding of the discharge instructions, reinforce the discharge instructions, and care transition post hospitalization to home.	The stroke program of a large academic center began post discharge phone calls in 2013 on patients who were discharged home after a stroke.	The call-back occurred within 7 days of discharge and two attempts were made to reach the patient. We reviewed the first two months of call-backs in 2013 and changes were made on the standard work to improve response rate.	The data supports a positive correlation between patient call-backs and patient satisfaction scores related to care transitions and discharge domains in the stroke population.
Ericson, J., Flacking, R., Udo, C. (2017) Mothers' experiences of a telephone based breastfeeding support intervention after discharge from neonatal intensive care units: a mixed-method study. <i>Int Breastfeed J</i> . doi: 10.1186/s13006-017-0142-9. PMID: 29270208; PMCID: PMC5735875	The purpose of this study was to explore the mothers' experiences of the proactive and reactive telephone support.	493 breastfeeding mothers of preterm infants (born <37 weeks GA) who had spent >48 h in a NICU and were discharged from one of six NICUs in Sweden.	This study was an evaluation of an RCT using a qualitative-driven, concurrent, embedded mixed-method approach in which data from questionnaires and telephone interviews were used	The mothers who received proactive support reported that they felt strengthened, supported and secure, as a result of the continuous care provided by staff who were knowledgeable and experienced. The mothers who received reactive support experienced contradictory feelings; some felt secure because they had the opportunity to call for support, whereas others found it difficult to decide when and if they should use the service. A limitation of this study is that the qualitative data originated

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				from written open-ended questions and that the interviews were conducted over the telephone instead of face-to-face.
Health Quality Ontario (2017). Effect of early follow-up after hospital discharge on outcomes in patients with heart failure or chronic obstructive pulmonary disease: A systematic review. Ontario health technology assessment series, 17(8), 1–37	This systematic review evaluated the clinical effectiveness of early follow-up, within either 7 days or 30 days after hospital discharge, compared with usual care or a different time to follow-up, in reducing readmissions, emergency department visits, and mortality in patients with heart failure or COPD.	Of 3,228 unique citations, we identified 10 eligible studies: one randomized controlled trial, two nonrandomized controlled trials, and seven observational studies. Four studies were specifically on 7-day follow-up and 30-day health outcomes. The other six studies were on 30-day follow-up and more variable time to health outcomes	Follow-up was conducted by general and specialist physicians, nurses, and pharmacists in clinics, by telephone, and by home visit.	Based on low- and very low-quality evidence, follow-up within 7 days and within 30 days of discharge from hospitalization for heart failure or COPD-compared with usual care or no follow-up-were both associated with a reduced risk of all-cause readmission, emergency department visits, and mortality. Overall, there is a lack of large, methodologically robust studies specifically focusing on the effectiveness of 7-day follow-up after discharge in improving patient outcomes.
Hendrickson, S. B., Simske, N. M., DaSilva, K. A., & Vallier, H. A. (2020). Improvement in outpatient follow-up with a post discharge phone call intervention. <i>Journal of the American Academy of Orthopedic Surgeons</i> , 28(18), e815–e822. <a href="https://doi.org.ezproxy.umsl.edu/10.5435/JAAOS-D-19-00132">https://doi-org.ezproxy.umsl.edu/10.5435/JAAOS-D-19-00132</a>	The purpose of this study was to assess the effect of a personalized phone call placed 3 to 5 days after hospital discharge on attendance at the first post-discharge outpatient clinic visit.	One hundred fifty-nine patients were exposed to a reminder phone call, with 33% of patients being reached for a conversation and 28% receiving a voicemail reminder.	This prospective study was done at an urban level 1 trauma center. Phone calls were made by a trained trauma recovery coach, and the main outcome measure was attendance at the first post discharge clinic visit.	Patients reached by telephone after discharge had better rates of subsequent clinic attendance. Economic factors and substance use appear vital to postoperative clinic visit compliance. Patients with met psychosocial needs, as identified by individuals with satisfactory emotional support, and exposure to TRS had the highest rates of post discharge appointment attendance.
Hoffman, J. & Pelosini, L. (2016) Telephone follow-up for	The purpose of this paper is to investigate the feasibility of	All patients were offered a further clinic review if required.	Prospective, non-randomized cohort study. A ten-point	Patient satisfaction was graded 8.9 out of 10; 81.6 per cent

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<p>cataract surgery: Feasibility and patient satisfaction study. <i>International journal of health care quality assurance</i> 29.4: 407-16. ProQuest.</p>	<p>telephone follow-up (TFU) after uncomplicated cataract surgery in low-risk patients and patient satisfaction with this alternative clinical pathway.</p>	<p>Exclusion criteria comprised ophthalmic co-morbidities, hearing/language impairment and high risk of post-operative complications.</p>	<p>subjective ophthalmic assessment questionnaire and a six-point patient satisfaction questionnaire were administered to patients following routine cataract surgery at two to three weeks post-procedure.</p>	<p>defined TFU as convenient and 75.5 per cent of patients preferred TFU to routine outpatient review. Non-randomized with no control group; small sample size. One patient was unable to be contacted.</p>
<p>Khresheh, R., Suhaimat, A., Jalamdeh, F., &amp; Barclay, L. (2011). The effect of a postnatal education and support program on breastfeeding among primiparous women: A randomized controlled trial. <i>International Journal of Nursing Studies</i>, 48(9), 1058–1065. <a href="https://doi-org.ezproxy.umsl.edu/10.1016/j.ijnurstu.2011.02.001">https://doi-org.ezproxy.umsl.edu/10.1016/j.ijnurstu.2011.02.001</a></p>	<p>The objectives of this study were to test whether the introduction of an educational program supporting breastfeeding would increase the proportion of women who breastfed fully to six months, improve the women's level of breastfeeding knowledge, and decrease the proportion of infants admitted to hospitals due to gastrointestinal illnesses.</p>	<p>90 primiparous women who had given birth to a healthy, full term, singleton baby at two hospitals in the southern region of Jordan</p>	<p>Women were randomly allocated to either the intervention group (n=45), in which they were offered a one-to-one postnatal educational session and follow-up phone calls at two months and four months postpartum, or the control group (n=45), in which they received routine postnatal care.</p>	<p>Although the postnatal education and support program improved breastfeeding knowledge among women in the study, this increase in knowledge did not translate to an increase in the duration of full breastfeeding to six months.</p>
<p>Kumthekar, A., &amp; Johnson, B. (2018). Improvement of appointment compliance in an underserved lupus clinic. <i>BMC Health Services Research</i>, 18(1), N.PAG. <a href="https://doi-org.ezproxy.umsl.edu/10.1186/s12913-018-3429-7">https://doi-org.ezproxy.umsl.edu/10.1186/s12913-018-3429-7</a></p>	<p>To identify major obstacles to appointment compliance and quantify a measurable effect of a simple phone call intervention on the clinic show rate</p>	<p>We retrospectively looked at the show rates from November 1st, 2013 to June 30th, 2014 at our Lupus clinic, which is located in Bronx, NY. The scheduled patient chart was crosschecked if the patient made it to the appointment by verifying the provider note.</p>	<p>A patient survey was implemented over a period of 8 weeks from July 1st, 2014 to August 12th, 2014. A reminder phone call intervention 2–3 days prior to the visit was planned. The intervention was implemented from September 1st, 2014 to April 30th, 2015. Data was analyzed after the end of the intervention period.</p>	<p>A simple telephone call reminder significantly improves clinic show rates in an underserved Lupus clinic, which can help improve health parameters in the Lupus population.</p>
<p>Najafi Ghezaljah, T., Sharifian, S., Nasr Isfahani, M., Haghani, H. (2018) Comparing the effects of education using telephone</p>	<p>The aim of this study was to compare the effects of self-management (SM) education using telephone follow-up and</p>	<p>This randomized clinical trial was conducted with 100 patients.</p>	<p>They were randomly allocated to four groups: (i) control, (ii) SM training</p>	<p>SM education using telephone follow-up and/or smartphone-based</p>

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<p>follow-up and smartphone-based social networking follow-up on self-management behaviors among patients with hypertension. <i>Contemp Nurse</i>. 54(4-5):362-373. doi: 10.1080/10376178.2018.1441730. Epub PMID: 29451091</p>	<p>mobile phone-based social networking on SM behaviors among patients with hypertension</p>		<p>without follow-up, (iii) telephone follow-up and (iv) smartphone-based social networking follow-up. The hypertension SM behavior questionnaire was used for data collection before and six weeks after the study.</p>	<p>social networking follow-up influenced SM behaviors among patients with hypertension.</p>
<p>Patel, S. D., Nguyen, P. A. (., Bachler, M., &amp; Atkinson, B. (2017). Implementation of post discharge follow-up telephone calls at a comprehensive cancer center. <i>American Journal of Health-System Pharmacy</i>, 74 Suppl 2(11 Supplement 2), S42-S46. doi:10.2146/ajhp160805</p>	<p>The development and implementation of a pharmacy-driven, post discharge follow-up telephone call program to assess medication adherence, provide education, and address medication-related concerns are discussed.</p>	<p>A clinical pharmacy specialist, a clinical pharmacy manager, a postgraduate year 1 pharmacy resident, and an education specialist at The University of Texas MD Anderson Cancer Center collaborated to create a post discharge telephone call program within a transitions-of-care (TOC) pilot program. Various education and training materials were created to ensure trainees were competent.</p>	<p>See left column.</p>	<p>Pharmacy is well positioned to complete an accurate medication review and conduct postdischarge telephone calls to address medication-related issues. By providing these services, patients will receive continuity of care and positively impact emergency room visitation rates and hospital readmission rates.</p>
<p>Salmany, S. S., Ratrouf, L., Amireh, A., Agha, R., Nassar, N., Mahmoud, N., Rimawi, D., &amp; Nazer, L. (2018). The impact of pharmacist telephone calls after discharge on satisfaction of oncology patients: A randomized controlled study. <i>Journal of Oncology Pharmacy Practice</i>, 24(5), 359–364. <a href="https://doi-org.ezproxy.umsl.edu/10.1177/1078155217709616">https://doi-org.ezproxy.umsl.edu/10.1177/1078155217709616</a></p>	<p>The aim of the study was to determine the impact of telephone follow-up calls on satisfaction in oncology patients after hospital discharge.</p>	<p>Oncology patients after hospital discharge</p>	<p>The experimental group with the telephone follow-up (TFU) calls (intervention) and the control group (no intervention). The telephone follow-up call was conducted within 72 h after discharge.</p>	<p>Telephone follow-up calls conducted by a pharmacist to discharged oncology patients did not improve patients' satisfaction, emergency room visits or hospital readmissions; however, they helped to identify medication-related adverse effects in the oncology patients.</p>
<p>Tackitt, H. M., Eaton, S. H., &amp; Lentz, A. C. (2016). Nurse-initiated telephone follow up after ureteroscopic stone surgery.</p>	<p>Observe if nurse practitioner led post-operative phone calls made 24-48 hours</p>	<p>Quality improvement (QI) project using the DMAIC (define, measure, analyze, improve, and control) model designed to</p>	<p>Nurse practitioner led post-operative phone calls made 24-48 hours after discharge</p>	<p>They found that routine calls made to these patients are important,</p>

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Urologic Nursing, 36(6), 283-288. doi:10.7257/1053-816X.2016.36.6.283	after discharge decreased the amount of emergency room visits and nurse advice line calls made after ureteroscopic stone surgery	decrease the rate of emergency department (ED) visits and nurse advice line calls after ureteroscopic stone surgery.		beneficial, and effective in improving cost effective care in all areas of care.
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## Appendix B

Table A1: Logic Model

<b>Resources</b>	<b>Activities</b>	<b>Outputs (Objectives)</b>	<b>Short- &amp; Long-Term Outcomes</b>	<b>Impact</b>
Computer	Evaluate individual patient EHR of discharged patients in October 2019 and October 2020	Determine the impact that follow up phone calls have on postpartum patients 2-3 days after discharge by measuring number of mothers that attended there postpartum follow up appointment after discharge, number of mothers that continued to breastfeed after discharge, and number of patients that needed/acquired more education during the follow up call.	Improvement in patient follow up appointment attendance	Possible implementation of follow up phone calls of discharged patients in other departments
Access to Midwestern Hospital-	Develop data collection tool		Increased breastfeeding support	Improved department productivity

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Mother/Baby department				
Electronic Medical Records (EHR)	1 to 2 months to collect data		Increased patient health knowledge	



**Appendix C**

Figure A1: **Data Collection Tool for October 2019**

**Patient \_\_XXX (example)\_\_\_\_\_**

**Time frame after discharge:    1-2 weeks    6 weeks    8 weeks (circle one)**

- **Age \_\_\_\_\_**
- **Race/ethnicity \_\_\_\_\_**
- **Mode of delivery: Vaginal or Cesarean (circle one)**
- **Multipara or Primipara (circle one)**
- **Did patient attend postpartum follow up visit: Yes or No (circle one)**
- **Is patient breastfeeding? Yes or No (Circle one)**

**Appendix C**  
**Data Collection Tool for October 2020**

Patient \_\_XXX (example)\_\_\_\_

Time frame after discharge:    1-2 weeks    6 weeks    8 weeks (circle one)

- Age \_\_\_\_\_
- Race/ethnicity \_\_\_\_\_
- Mode of delivery: Vaginal or Cesarean (circle one)
- Multipara or Primipara (circle one)
- Did patient attend postpartum follow up visit: Yes or No (circle one)
- Is patient breastfeeding? Yes or No (Circle one)
- Was additional teaching needed during phone call? Yes or No (circle one)
- Breastfeeding support
- Explaining medication (use and how to take them)
- Explaining diagnosis

**Appendix D**  
**Statistics**

**Table 2**

<b>Variables</b>	<b>Pre-Intervention (N=50)</b>	<b>Post-Intervention (N=50)</b>	<b>Statistical Significance (p value)</b>
<b>Age</b>	28.8 (SD 6.06)	28.20 (SD 6.67)	.649
<b>Race</b>			
African American	37 (74%)	32 (64%)	.547
White	11 (22%)	14 (28%)	.549
Hispanic	1 (2%)	4 (8%)	.180
Asian	1 (2%)	0 (0%)	n/a
<b>Mode of Delivery</b>			
Vaginal	41 (82%)	38 (76%)	.736
C-Section	9 (18%)	12 (24%)	.513
<b>Gravida/Para</b>			
Primipara	24 (30%)	26 (32.5%)	.777
Multipara	27 (33.75%)	32 (40%)	.515

**Appendix E****Chi-Square****Table 3***Breastfeeding at 6 to 8 weeks postpartum*

Level	Observed Frequency	Expected Frequency
Pre-intervention	15	15.50
Post-Intervention	16	15.50

*Note.*  $\chi^2(1) = 0.03, p = .857$ .**Table 4***Chi-Square for Follow up appointment attendance*

Level	Observed Frequency	Expected Frequency
Pre-Intervention	27	28.00
Post-Intervention	29	28.00

*Note.*  $\chi^2(1) = 0.07, p = .789$ .