

**Safe Sleep Education for the Prevention of Newborn Falls**

Cierra Sullivan

College of Nursing, East Carolina University

Doctor of Nursing Practice Program

April 24, 2023

### **Abstract**

Incidents of newborn falls and drops are prevalent in the mother-baby care area, which illustrates a significant gap in care. National patient safety goals focus on eliminating the incidence of patient falls in the inpatient setting. This DNP project aimed to develop a standardized patient education tool using the American Academy of Pediatrics (AAP) safe sleep guidelines to decrease the risk of newborn falls in the mother-baby care setting. The project included an education session delivered to nurses and a patient education handout distributed to the parents of all newborns admitted to the mother-baby unit. Data collected included utilization of the handout, incidence of newborn falls, good catch events, and nurse feedback regarding the feasibility of the tool in practice. Over a 12-week implementation period, there were zero newborn falls. Good catch events were regularly reported, demonstrating that most events occurred while the newborn was in the mother's bed. Given these findings, the primary recommendation for practice is to incorporate a standardized education tool to deliver safe sleep education to decrease the risk of newborn falls in the mother-baby care setting.

*Keywords: newborn, safe sleep, safe sleep education, newborn falls, mother-baby*

**Table of Contents**

Abstract .....	2
Section I: Introduction .....	5
Background.....	5
Organizational Needs Statement.....	5
Problem Statement.....	6
Purpose Statement.....	7
Section II: Evidence.....	8
Literature Review.....	8
Evidence-Based Practice Framework.....	14
Ethical Consideration and Protection of Human Subjects.....	15
Section III: Project Design.....	17
Project Site and Population.....	17
Project Team.....	18
Project Goals and Outcomes Measures.....	19
Implementation Plan.....	20
Timeline.....	21
Section IV: Results and Findings.....	22
Results.....	22
Discussion of Major Findings.....	23
Section V: Interpretation and Implications.....	25
Costs and Resource Management.....	25
Implications of the Findings.....	27

Sustainability .....	29
Dissemination Plan .....	29
Section VI: Conclusion.....	31
Limitations and Facilitators.....	31
Recommendations for Others.....	31
Recommendations for Further Study.....	33
Final Thoughts.....	34
References.....	36
Appendices.....	39
Appendix A: Educational Presentation for Nurses.....	39
Appendix B: Patient Education Handout.....	40
Appendix C: Utilization/Feedback Report Tool .....	41
Appendix D: Post-Survey for Nurses .....	42
Appendix E: Data Collection Tool .....	43
Appendix F: Project Timeline .....	44
Appendix G: Data Collected Throughout Implementation .....	45
Appendix H: Utilization of Patient Education Handout vs. Newborn Census.....	46
Appendix I: Rate of Good Catch Events vs. Newborn Census.....	47
Appendix J: Project Budget .....	48
Appendix K: Doctor of Nursing Practice (DNP) Essentials .....	49

## Section I. Introduction

### Background

The infant mortality rate in the United States in 2019 was 5.58 deaths per 1,000 live births. Leading causes of death were congenital malformations, prematurity, low birth weight, sudden infant death syndrome (SIDS), maternal complications, and unintentional injuries (Ely & Driscoll, 2021). Amongst the countless scenarios of unintentional injuries that can lead to neonatal mortality, a metric that is closely followed is newborn falls in the inpatient setting. According to current data, approximately 600 to 1,600 newborn falls occur annually in United States hospitals (Association of Women's Health, Obstetric and Neonatal Nurses [AWHONN], 2020). Newborn falls and drops are terms used interchangeably to describe an event where a newborn descends unintentionally to the floor or another surface, such as a person or object (The Joint Commission, 2018). All newborns are considered at risk for this event. Current recommendations include safe sleep education as a prevention method (AWHONN, 2020).

The American Academy of Pediatrics published safe sleep guidelines that recommend a supine sleep position on a firm, flat surface, with no objects in the crib and discourages newborn bed-sharing with parents (Newberry, 2019). Behaviors that are reported to increase the risk of newborn fall events include parents sleeping with their newborns and newborns placed in the parent's bed to sleep (Loyal et al., 2018). Sharing this education is imperative for addressing the gap between parental behaviors and recommendations for preventing newborn falls.

### Organizational Needs Statement

This project was completed in partnership with a non-profit healthcare organization in central North Carolina with a mission to improve the community's health and well-being by providing compassionate, outstanding care to patients and their families ( [REDACTED] )

██████████, 2022). The organization has implemented a patient safety campaign to meet this goal. This program encourages all hospital units to implement measures that contribute to the goal of zero preventive patient injuries. Newborn falls are a metric included in this program. Newborn fall events are tracked and reported by the organization and include any newborn fall or drop in the mother-baby unit, newborn nursery, or neonatal intensive care unit (NICU). The organization is always searching for new interventions, such as innovative education and prevention strategies to prevent these events and contribute to the organization's goal of zero preventable injuries within the hospital (██████████ personal communication, March 10, 2022).

An area within the hospital that focuses heavily on newborn falls is the mother-baby unit. The nurses on the unit implemented signage in patient rooms and provided education regarding the ABCs of infant sleep: Alone, Back, Crib, and Safe transfers. Additionally, there was a policy in place that outlined expectations of a safe sleep environment for all admitted newborns. However, there was no policy in place that related safe sleep education to fall prevention in the organization (██████████ personal communication, March 28, 2022).

The organization's goal of preventing newborn falls by reducing the incidence of bedsharing among mothers and their newborns is also consistent with Healthy People 2030 goals. Healthy People 2030 aims to increase the proportion of infants placed on their backs to sleep and increase the proportion of infants in a safe sleep environment. In 2016, only 78.7% of all infants born in the United States were reported to be placed on their backs to sleep, with no data regarding the rates of infants in a safe sleep environment (Office of Disease Prevention and Health Promotion, n.d.).

### **Problem Statement**

Initiatives to promote safe sleep environments for newborns have proven to be effective in decreasing the overall incidence of sudden unexplained infant death (SUID) for newborns and infants at home, as well as reducing the overall rate of newborn falls in the inpatient setting (Centers for Disease Control and Prevention [CDC], 2021). Although there were interventions in place, these were proven to be ineffective, as evidenced by two newborn falls in the fiscal year 2020 and one newborn fall per fiscal year in 2021 and 2022. Additionally, there was no policy in place regarding safe sleep education for newborn fall prevention ([REDACTED] personal communication, June 20, 2022). This demonstrated that the practices in place were inconsistent as effective fall prevention methods, and there was an indication for implementation and evaluation of new methods to determine the most effective strategy.

### **Purpose Statement**

The purpose of this quality improvement project was to develop, implement, and evaluate an educational program that decreases the risk of newborn falls on a mother-baby unit. The educational methods were multimodal, consisting of educational presentations for staff and educational tools reviewed with the parents of admitted newborns. This program was developed in collaboration with hospital leadership to ensure it was feasible and met the needs of the organization. Additionally, the intervention was continuously evaluated for utilization and efficacy by analyzing occurrences of newborn falls and near-miss events throughout implementation. The goal of this project was to develop a structured educational program that is effective in preventing newborn falls, with the possibility of developing a policy that would be implemented throughout each newborn care area in the organization.

## Section II. Evidence

### Literature Review

To identify strategies and guidelines that effectively decrease the likelihood of inpatient newborn falls in the neonatal period, a thorough literature review was conducted on the topic. The literature review was performed using the PubMed database, using the search terms *newborn falls*, *infant falls*, and *safe sleep*. The search query “newborn falls” was found to have more relevant literature than other searches, yielding 24 results. There were over 300 results related to ‘safe sleep’; however, most articles were related to outpatient education and SIDS prevention. Inclusion criteria included publishing date within five years, English language, studies conducted in the United States, and studies focused solely on newborn falls. Exclusion criteria included studies focused on pediatric units other than mother-baby, infants greater than 28 days old, and studies focused on different outcomes, such as SIDS and SUID prevention. A further search of the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database using the search query (*MH "Infant, Newborn"*) AND (*MH "Accidental Falls"*) was also conducted and yielded 23 results. Search filters included publishing date within five years, English language, and free full text available. Inclusion criteria included articles focused on falls in the inpatient newborn population, less than 28 days old, in the mother-baby unit. Exclusion criteria included articles published outside the United States, infants greater than 28 days old, and settings other than the mother-baby unit.

The literature was evaluated using Melnyk & Fineout-Overholt’s (2011) model for analyzing evidence. This model evaluates evidence from levels I through VII, highest to lowest, respectively (Melnyk & Fineout-Overholt, 2011). Due to the limited availability of resources on the topic, Levels VII and above were acceptable levels of evidence. After these parameters were



applied, six articles remained as valuable literature to support the concept and intervention.

These articles were extensively reviewed in their entirety to validate that they were appropriate and applicable to the project.

### ***Current State of Knowledge***

While there are many guidelines and studies regarding safe sleep education for SIDS and SUID prevention, published literature specific to inpatient newborn falls is limited. The Joint Commission (2018) considers all newborns at risk for fall or drop events, defined as any sudden, unintentional descent either to the floor or another surface, and recommends the development of a risk analysis tool with concurrent patient education for prevention. The literature cites that the overall rate of inpatient newborn falls is low compared to the volume of infants that are born and cared for in the hospital, yet the problem remains present and persistent (Seashore & Tully, 2018). An article published by Loyal et al. (2018) reviewed the demographics and events surrounding documented newborn falls over thirteen years at a single academic medical center. This article reported an average rate of 4.6 falls per 10,000 live births. Of these newborns that fell, 96.5% were term newborns, 62.1% were white, and 75.9% were breastfed. Additionally, 62.1% of these newborns were in the mother's bed at the time of the fall while the parent was sleeping (Loyal et al., 2018).

AWHONN (2020) published a practice bulletin addressing inpatient newborn fall prevention recommendations. This document defines newborn falls and drops as synonymous events and identifies multiple possible risk factors for newborn falls. These risk factors include parental fatigue, early morning feedings, hospital environment, and equipment failure/misuse. Though these risk factors are supported by evidence, the bulletin states that there is currently no validated screening tool in use to identify newborns at the highest risk for a fall. Therefore, all

newborns during the neonatal admission period are considered at risk for newborn falls. Recommendations focus on identifying risk factors, implementing newborn safety bundles, and ensuring adequate reporting of circumstances surrounding newborn fall events. AWHONN recommends that newborn safety bundles should include education, checklists, and frequent nurse rounding. Additionally, the bulletin further recommends relating newborn fall prevention with safe sleep education using physical resources in conjunction with verbal education (AWHONN, 2020).

### ***Current Approaches to Solving Population Problem(s)***

Upon review of current literature, several studies have supported the efficacy of the recommendations made by AWHONN. Multiple studies have implemented some variations of the newborn safety bundle to decrease the occurrence of newborn falls. Lipke et al. (2018) conducted a study at a *Baby-Friendly* designated hospital to evaluate the implementation of a newborn safety bundle that included the identification of maternal risk factors, crib cards with education for safe sleep guidelines, a parental safe sleep agreement, and a streamlined debriefing system for identifying causative factors for future prevention. The intervention also included a tool that allowed bedside staff to report observations of unsafe sleep events. Based on data obtained from the tool that demonstrated a decrease in the number of observed unsafe sleep situations, the bundle was said to be effective, with a decrease in identified risk events and zero newborn falls the year after the program was implemented (Lipke et al., 2018).

Another study described the successful implementation of a newborn safety program. The program, titled *What a Catch*, included a respite nursery for parents that were experiencing fatigue, hourly environmental assessments where the staff assessed the safety of the infant's sleep environment, and the presence of maternal fatigue. The program allowed staff to report near-

misses or observed situations where the infant was at risk for a fall, and staff intervened. The study was implemented in two mother-baby units in community hospitals and measured the rates of ‘good catch’ events. ‘Good catch’ events were defined as nurses that walked in on a mother and baby co-sleeping in bed and provided real-time feedback. The study found that the implementation of this intervention was well-received by patients and staff and is an effective method of newborn fall prevention (Knipper et al., 2021).

Though several components of the newborn safety bundles identified in the literature are similar, some studies took novel approaches to evaluate their efficacy in promoting newborn safety. A project completed by Karlsson et al. (2021) implemented a newborn safety bundle that included ‘quiet-time’ periods from 2:00-4:00 am/pm that restricted visitors and staff interaction with mothers unless there was an emergency to promote maternal rest. The project design combined this method with extensive maternal education and a safety pledge that nurses used to guide education while holding the mother accountable to the agreement to adhere to safe sleep guidelines. This study's results demonstrated that the intervention was adequate, with a decrease in newborn fall rates post-intervention. Nurses also reported that they believed that the quiet-time intervention was beneficial for promoting maternal rest and facilitating a safer environment to promote newborn rooming-in (Karlsson et al., 2021). Wells et al. (2019) also reported the successful implementation of a newborn falls prevention program that focuses on staff education regarding risk factors for newborn fall events and how to identify and intervene in observed unsafe sleep situations.

E. A. Duthie (2020) conducted a literature review that evaluated and reported results from nine studies that implemented a newborn safety bundle for the prevention of newborn falls. Duthie (2020) then developed a newborn safety bundle in their facility that included safe sleep

education for parents and staff caring for newborns and signage with reminders of safe sleep recommendations. Frequent visual checks were implemented to monitor parental adherence to guidelines. Despite evidence that the program was successful in reducing newborn falls during the intervention and immediate post-intervention period, a newborn slip did occur later while the program was still in effect. This demonstrated that other factors must be addressed to maintain the goal of zero inpatient newborn falls. Duthie (2020) suggests further research using sleep science and moving away from the assumption that mothers intentionally fall asleep with their newborns to determine the best way to address this problem. In the interim of further research on sleep science, recommendations include persistent and extensive education on safe sleep guidelines to all parents of newborns in the hospital (Duthie, 2020).

The findings from the literature review were discussed with key stakeholders in the medical center where the project took place. At that time, the primary intervention in place for preventing newborn falls was a 5–10-minute education session on safe sleep. However, there was no tool that nurses were using to guide the education to ensure that it was consistently delivered to each of the mothers on the unit (██████████ personal communication, June 13, 2022). The majority of the literature reviewed noted the successful implementation of newborn safety bundles. Additionally, the recommendations from AWHONN explicitly focus on the importance of the education component of this bundle (2020). Each research study included the safe sleep education component as an integral part of the bundle. Still, no data or tools were available to guide nursing staff on providing effective education consistently. Rather than begin with a comprehensive newborn safety bundle, it was determined to be more feasible to conduct a quality improvement project to determine if the proposed education program effectively delivers

safe sleep guidelines to parents in the mother-baby unit by decreasing occurrences of good catch events and newborn falls.

### ***Evidence to Support the Intervention***

Throughout the literature, studies that focus on preventing newborn falls reiterate the importance of thorough and consistent safe sleep education as an integral component of the newborn safety bundle to prevent inpatient newborn falls. Clinical practice guidelines also support this education (AWHONN, 2020). The emphasis for hospitals to transition to the *Baby-Friendly* designation and encourage parents to room in with their newborns for the postpartum period has been associated with increased rates of newborn falls (Karlsson et al., 2021). A study focused on a hospital system that encourages rooming-in reported that 62% of newborn falls that occurred during the data collection period took place while the baby was in bed with a parent. The same percentage of falls (62%) were related to the parent falling asleep in bed with the newborn (Loyal et al., 2018). Another study reported two infant falls occurred in their facility in one year, both being attributed to a parent sleeping with the baby (Lipke et al., 2018).

Findings from the literature review revealed that each component of the newborn fall prevention bundle may contribute to a decrease in newborn falls. However, it is imperative to determine an adequate method of delivering safe sleep education. In this medical center's mother-baby unit, nurses educated parents about safe sleep and fall prevention during the admission process. However, there was no policy in place for education on the prevention of newborn falls using safe sleep education or tools available to track observations of unsafe sleep environments. Additionally, no tool was in use at the project site to ensure that education was delivered consistently to each patient with each admission. There was also no evaluation method to determine if the teaching method in use was effective. Consistent with the prevalence of

newborn falls in other facilities, fall occurrences in this facility were low, yet persistent with three newborn falls over the past two years (██████████ personal communication, June 13, 2022).

This demonstrated the need for further investigation into an effective method of safe sleep education that can be implemented long-term to adhere to current recommendations for preventing newborn falls.

### **Evidence-Based Practice Framework**

The implementation and evaluation of this quality improvement project was executed using the Plan-Do-Study-Act (PDSA) model of rapid cycle change. W. Edwards Deming introduced the PDSA method in 1993 to guide researchers based on a structured implementation and reevaluation framework. The framework encourages the process of implementing change, evaluating the success and areas for improvement, making changes, and reimplementing with an improved design supported by the data. This process is a never-ending cycle of change and improvement (The Deming Institute, 2022).

Due to healthcare's ever-changing and evolving nature, the PDSA cycle is frequently used when implementing quality improvement projects for practice changes. The first step (Plan) in the PDSA cycle focuses on the importance of identifying a problem, reviewing the literature to support the plan, forming the best team to support the implementation of the change, and planning the structure and evaluation methods of the change. The next step (Do) of the framework consists of the implementation of the intervention, or delivery of the education plan and the use of the standardized education tool for nurses to review safe sleep guidelines with parents. After implementation, the next step (Study) is to evaluate the efficacy of the intervention in real-time. This was achieved by assessing the utilization of the tool and nurses' feedback for improvement. The final step (Act) restarts the cycle and consisted of making changes to the

intervention based on input and revising based on these factors (Institute for Healthcare Improvement [IHI], 2022).

The use of the PDSA cycle when developing interventions to promote safe sleep and decrease newborn falls is supported in the literature. A study implementing a newborn fall safety bundle utilized a multi-cycle PDSA process to implement a program aimed at developing an effective newborn fall safety program. The outcome of the program using the PDSA cycle was effective, demonstrating a 36% reduction in the rate of newborn fall events (Miner, 2019). This project utilized this model with weekly data collection and reevaluation of project tools based on the trends in the data. Data collection focused on nurse utilization, feedback, and ‘good catch’ event frequency. If utilization rates decreased, ‘good catch’ events increased, or negative feedback regarding the project tools was received, project components were redesigned.

### **Ethical Consideration & Protection of Human Subjects**

Key stakeholders involved in the outcome of this project included nurses, medical staff, hospital administration, and the parents of newborns admitted to the mother-baby unit. The project's intended outcome was to reduce the risk of newborn falls. This was set to be accomplished by determining the most effective educational strategy for delivering information to parents regarding safe sleep guidelines.

The target population for this project was nurses working in the mother-baby unit. Each nurse working on the unit had an equal opportunity to participate in this program and an equal opportunity to provide feedback and input on program revisions using the PDSA process. There were no anticipated inequities or potential harm to this population. Additionally, newborns and parents admitted to the mother-baby unit during the implementation of this program were impacted by the educational program provided. As the education was based on guidelines

recommended by key professional organizations for this patient population, there were no anticipated adverse events as parents implemented these recommendations into the care of their newborns. The tool was written in English; however, the nurse could review the tool using an interpreter in the patient's native language, and illustrations were present to support the guidelines.

To prepare for all approval processes required when implementing research in a clinical setting, Collaborative Institutional Training Initiative (CITI) modules were completed. Additionally, documents describing the intervention and the outcome measurement process were submitted to the facility-wide research committee at the medical center where the project was implemented. Per the research committee, the nature of this project was deemed as a quality improvement initiative not involving human research subjects. Therefore, no Institutional Review Board (IRB) approval was requested by the facility. The affiliated University deemed the project a quality improvement initiative and, therefore, waived IRB approval.



### **Section III. Project Design**

#### **Project Site and Population**

This project was completed in partnership with a 970-bed healthcare organization in central North Carolina. Implementation occurred in the mother-baby unit over a twelve-week period. The target population included all registered nurses employed on the unit. Facilitators included hospital leadership interest and fall prevention benchmarks. Major stakeholders in hospital leadership positions were very supportive of the project as the intended outcomes contributed directly to the organization's goals for patient safety initiatives. Additionally, the drive for nurses to reach benchmarks, such as zero newborn falls, was thought to encourage staff participation. Potential barriers included staff turnover and workload. The nurse manager stated that there were several contract staff working on the unit for short-term travel contracts during implementation. This led to staff turnover when contracts ended during the project implementation phase. Nurse workload was also a large factor, as many nurses had full patient assignments daily and may not have been amenable to additional work tasks.

#### ***Description of the Setting***

The project was implemented on the mother-baby unit located on the flagship campus of the healthcare organization. The organization reported 8,652 births at the location in the fiscal year 2021. The facility has an antepartum unit, a labor/delivery/recovery unit, a mother-baby unit, and a level IV neonatal intensive care unit (NICU). The mother-baby unit has 38 beds and provides care for women and their newborns from the time of transfer from the labor and delivery unit to discharge. The average patient length of stay is two days postpartum. The unit encourages rooming-in, keeping the baby in the mother's hospital room throughout the duration of the admission, as part of the family-centered model of care. There were two newborn falls in

the fiscal year 2020 and one fall in the fiscal year 2021. Prior to implementation, there was one fall in the fiscal year 2022 on this unit.

### ***Description of the Population***

The target population of the project includes all staff nurses working in the mother-baby unit. There were 100 nurses on staff for this unit, including nurses employed by the organization and those contractually affiliated through healthcare staffing agencies. There were approximately 10 nurses on the unit each shift. The nurses typically worked 12-hour shifts, either 0700-1900 or 1900-0700. Each nurse was assigned to 3 to 4 mother-baby couplets per shift.

### **Project Team**

The project team consisted of the project leader (DNP student), project site champion (nurse manager), university faculty advisor, the medical organization's research department leadership, unit supervisors, and unit staff. The project leader developed the project, collaborated with other members of the team, collected data, and presented findings. The project site champion's role included participation and approval of project design, approval of the project implementation timeline, and communication with the research committee regarding approval and concerns. Additionally, the project site champion assisted with data collection by reporting newborn fall rates weekly. The university faculty advisor provided guidance to the project leader throughout all stages of project development, implementation, and evaluation. The research department leadership was responsible for final project approval and ensuring that the project was fair and equitable for the target population and that all due diligence had been maintained throughout project development. Unit supervisors participated in education sessions and had a general knowledge of project design, serving as a liaison between staff and the project leader. The nursing staff had the most active role in implementing the project, reporting utilization and

observations, and providing feedback to the project leader with recommendations for changes in project design.

### **Project Goals and Outcome Measures**

The purpose of this quality improvement project was to implement an educational program that was effective in decreasing the risk and incidence of newborn fall events, supported by evidence collected during project implementation. The project used several multimodal tools, including presentations, handouts, forms, and a survey. Outcome measures included nurse utilization of project tools, newborn fall rates, good catch event frequency, and nurse feedback. This data was evaluated weekly throughout the implementation phase.

### ***Description of the Methods and Measurement***

The project intervention included an educational presentation for staff nurses that provided current research and guidelines supporting the intervention (Appendix A). A patient education handout with information about safe sleep guidelines for newborn fall prevention was placed in all admission packets for nurses to review with patients (Appendix B). The patient education handout included statistics regarding the incidence and events surrounding newborn falls, followed by explicit AAP safe sleep guidelines and a QR code that linked to a video of a pediatrician providing a firsthand account of infant loss related to co-sleeping. Data regarding nurse utilization of the handout, frequency of good catch events, and nurse feedback were obtained using a form that nurses completed and were encouraged to submit daily (Appendix C). Newborn fall rates were reported by the unit nurse manager using reports generated through adverse event reporting software used at the medical center. A survey was sent at the end of project completion to all nursing staff members via email that evaluated staff feedback and desire to incorporate project components into routine care (Appendix D).

### ***Discussion of the Data Collection Process***

Data obtained from utilization forms and newborn fall reports were collected and analyzed using a spreadsheet developed by the project leader (Appendix E). This spreadsheet was used to record weekly patient census, fall rates, utilization totals, near-miss occurrences, and major themes from nurse feedback. The data recorded was then analyzed weekly for trends. Data and trends were reported to the project team weekly during shift huddles using a graphical representation of results. Data from the final nursing survey was collected using SurveyMonkey.

### **Implementation Plan**

Implementation began with a presentation at a monthly staff meeting to review current evidence and guidelines regarding safe sleep education for newborn fall prevention to nursing staff (Appendix A). This presentation also included an explanation of project goals and outcomes, the nurses' role in implementation, and implementation procedures. The patient education handout was placed in all admission packets (Appendix B). Nurses were encouraged to review this handout in detail with every patient during admission and complete the utilization and feedback tool during every shift. The tool was printed on small cardstock paper and located beside the time clock. The nurses were instructed to obtain a blank form when clocking in and return the completed form in a locked box beside the time clock when clocking out for their shift. The project leader collected forms weekly after 0700 on Monday. Data collection intervals ran from each Monday at 0700 to 0659 the following Monday. Newborn fall rates and patient census were reported weekly to the project leader by the project site champion. The project leader met with staff during shift huddles once weekly to review data and trends and discuss project changes accordingly. Based on the trends identified from data collection and feedback from the project team, PDSA reviews were completed every three weeks. After completion of the intervention

implementation, a survey was sent to all nursing staff, and the results were reported to the unit nurse manager and the facility's research committee.

### **Timeline**

The overall timeline of program implementation was from August 2022 to December 2022 (Appendix F). In August 2022, an educational presentation was provided to the nursing staff. Starting September 5, 2022, the patient education handout was made available on the unit and reviewed with patients, as well as nurse completion of the utilization tool. This process continued until the end of November 2022. The post-survey was sent to all nursing staff in December prior to the completion of twelve weeks. Data were collected throughout the implementation period.

## Section IV. Results and Findings

### Results

Throughout the implementation period, data was collected on a weekly basis over a 12-week period. The shift rotations for the staff on the unit were 0700-1900 and 1900-0700. Given this, data periods were organized into weeks, beginning each Monday at 0700 and concluding the following Monday at 0659. The project leader was present on site each week to collect the feedback forms and newborn census. The data collected were then organized by their respective week. Raw data was input into a spreadsheet that included patient census, number of utilization forms returned, educational handouts reviewed, good catch events, and newborn falls. Additionally, qualitative data was entered into a Word document. Feedback regarding the forms was organized by week, and narrative reports of good catch events were analyzed on a cumulative basis over the course of data collection.

The number of utilization tools returned over the course of implementation was highly variable, ranging from three to 29 tools per week, with 130 returned total. Of the 885 patients admitted, 238 (26.9%) handouts were reviewed during the implementation period (Appendix G). The number of handouts reviewed each week was highly variable, ranging from five to 53 per week (Appendix H). This variability was directly contributed to the lack of staff participation. The goal participation rate prior to project implementation was 25%. However, estimated average staff participation was 7.74%.

There were zero falls during the implementation period. Reporting good catch events provided insight regarding the risks of newborn falls. Staff consistently provided data on good catch events, reporting 36 over the course of implementation (Appendix I). The average incidence of reported good catch events related to the newborn census was 4.08%. Of the total 36 total reported good catch events, there were 13 (36.1%) narrative reports provided. There

were seven instances out of 36 (19.4%) of all good catch events reported where the mom was found asleep while holding the baby. Additionally, five of 36 (13.9%) events indicated that the baby was found sleeping in the mother's bed. One (2.8%) incident included the patient's father sleeping with the baby, and two (5.6%) incidences involved improper use of blankets during sleep times, both reporting that the blanket was thick and around or over the newborn's face. Finally, of the 13 good catch narrative reports, there were 10 (76.9%) instances where the nurse intervened in real-time.

Qualitative data was primarily collected through the feedback tools returned by the nursing staff. Overall, there were 39 comments provided regarding the utilization of the patient education handout, and 13 narratives were provided describing good catch events. Of the feedback provided, the content was reviewed and organized into major themes. These themes included *parents receptive/verbalized understanding, visual component, and language barrier*. Of the 39 comments, 17 comments were related to patient receptiveness to the information and verbalization in an understanding of the content. Four of the comments provided mentioned that either the parents or the staff member appreciated the visual component of the handout. Additionally, two comments noted the presence of a language barrier while using the handout.

### **Discussion of Major Findings**

The project findings supported the current evidence and recommendations regarding the utilization of safe sleep education for newborn fall prevention. Loyal et al. (2018) reported that 62.1% of newborn falls occurred in their study while the parent was sleeping, 62.1% were in the mother's bed, and 65.5% were with the mother. Though these values are higher than the findings in this project, the project findings were consistent reflecting that many of the good catch events were related to the mother sleeping while holding the baby (19.4%) or the baby was in the

mother's bed (13.9%). The variation in overall findings may be attributed to limited narrative feedback regarding the good catch events documented, with only 36% of the reported good catch events having a narrative documenting the details surrounding the incident.

Knipper et al. (2021) reported that a program that encourages nurses to round frequently on postpartum mothers and their newborns while in the hospital can increase parental adherence to safe sleep guidelines through real-time education, simultaneously decreasing the risk for newborn falls. Through this type of program, nurses are encouraged to assess the safety of sleep settings for the newborn, communicate consistent education and expectations, and develop a safety plan with parents to ensure adherence to these recommendations. Findings from the project validated that this process was not only feasible but was occurring as part of routine nursing care. Nursing intervention and reeducation were reported in 36% of the good catch event reports. During each incidence involving intervention and reeducation, 100% of the nurses stated that this intervention led to an immediate change in parental behavior or infant sleep position to reflect safe sleep guidelines. This supports the claim that nurses hold a pivotal role in providing intervention and education to patients in real-time and that they should feel comfortable doing so, as it is likely to lead to a positive outcome.



## Section V. Interpretation and Implications

### Costs and Resource Management

Overall, the benefit of the project outweighs the cost associated with its implementation. Originally, the cost of materials and printing of the educational handout was the responsibility of the project leader. At that time, the cost of the handouts was \$250 every three weeks based on the amount used. Considering a 12-week implementation period, the estimated cost for the patient education handout was \$1,000.00. At week six, the printing of the patient education handout was transitioned to the project site's print shop. Large poster versions were created and posted in each patient room. These were also printed by the project site. The utilization feedback tools were purchased in bulk in two instances, both of which were included in the \$250 purchase of patient handouts. The box utilized to collect these cards was a locked security box to ensure confidentiality; this cost was \$15.00. During weeks 7-12, a small staff participation incentive, a \$10.00 gift card, was implemented to encourage participation in providing feedback, totaling \$60.00 (see Appendix J).

Personnel costs associated with project implementation included the nurse techs that placed the handouts into the patient education packets, the nursing staff to implement the intervention, and the project site champion. The average salary for a nurse tech in the healthcare region where the project site is located is \$16.00/hr. (Indeed, n.d.-a). Over the course of seven days at 24 hours/day, this equals a cost of \$2,688.00 per nurse tech per week of implementation and \$32,256 over the course of 12 weeks. Based on those same time parameters, an average RN salary of \$38.00/hr., the cost of 24-hour nursing care for one nurse throughout the 12 weeks of implementation is \$76,608 (Indeed, n.d.-b). The project site champion in this case is also a registered nurse. The total cost of the project was estimated at \$109,939.

There were over 375 clinical hours invested by the project leader throughout the stages of project planning, organizational applications and approvals, literature review, project implementation, and data analysis. This also included multiple stakeholder meetings with organizational leaders and nursing staff, faculty meetings at the project leader's educational institution, 4-6 hours on-site weekly during implementation, nurse education presentations, and presentations to disseminate findings. In addition to the financial costs and time devoted to this project, additional resources needed for project implementation included organizational support and research policies and procedures. Resources such as publication databases to review literature, educational institution oversight, and faculty guidance were all necessary for project implementation.

Areas to eliminate the cost to the organization when implementing on a larger scale include the elimination of the paper component of the feedback tool for utilization tracking and good catch reports and transitioning this to an electronic system that is already in place in the organization. Additionally, the project site champion can incorporate audits and routine staff education into their monthly responsibilities as the unit's nurse manager. This would utilize staff already available and eliminate the need for a separate project leader.

Overall, the cost of the project implementation is considerably less than the benefit of the project outcomes. The incidence of a newborn fall can lead to expenses for both the parents, as well as the organization. Depending on the severity of the injury, this may include imaging, such as computerized tomography (CT) scans or magnetic resonance imaging (MRI), prolonged length of stays, as well as an advanced level of care, such as neonatal intensive care unit (NICU) stays. Additionally, severe injuries could impact the quality of life of the newborn or lead to chronic conditions that must be managed over the lifespan. Aside from the financial cost of a

newborn fall, there are also substantial emotional impacts on both the parents and the staff involved in the incident. That said, the cost of the nursing staff and nurse techs is negligible, as this is a cost that will be present regardless of the project implementation. Also, the cost of the handout can be eliminated and transmitted into a digital version. All of this demonstrates the substantial gap in cost versus benefit of the implementation and sustainability of this intervention.

### **Implications of the Findings**

The implications of the findings of this project encompass those of the patients in the target population, nurses, as well as the healthcare system. The findings impact nursing practice and key stakeholders in the organization. This also relates to the patient's perspective, as well as the processes within the healthcare system.

#### ***Implications for Patients***

Implementing standardized patient education on safe sleep impacts the safety of newborns in the mother-baby unit, decreasing the risk of falls by promoting safe sleep practices. There were zero newborn falls throughout the implementation period. The evidence of zero falls demonstrates there was no increased risk for falls associated with the implementation of the intervention. Additionally, the incidence of good catch events did not increase following the implementation of the educational program. Nursing feedback reported that parents were very receptive to the handout and preferred having a visual reminder of the recommendations and guidelines. Additionally, verbal feedback from nurses reported an increased perception of parental empowerment after reviewing the handout and that parents were satisfied with the handout and were more engaged in the care and safety of their newborns.

#### ***Implications for Nursing Practice***

In addition to positive impacts on patient experience and outcomes, the project demonstrated a positive impact on nursing practice. Through several PDSA cycle reviews, the nursing staff reported that the most effective method of remembering to provide the education to the parents was to have the handout physically in the bassinet during admission so that it had to be removed to place the baby in the bassinet. The nurses reported that this was an easy reminder to review the education and that it made the parents relate the bassinet to the instructions. Additionally, having a single handout to review ensured that the education was efficient and consistent for each patient from every nurse. This allowed the patient to have a better understanding and for the nursing staff to identify gaps more accurately in education. The aspect of standardizing and focusing on the quality of nurse-patient communication may positively impact patient satisfaction, further improving the patient experience during hospitalization. Finally, providing consistent education to nurses and encouragement for reporting good catch events facilitated nurse comfort in providing real-time interventions for good catch events, further decreasing the risk of falls.

### ***Impact for Healthcare System(s)***

The impact on the healthcare system related to this project is primarily related to quality and safety metrics. Eliminating newborn falls is a patient safety goal of the organization. The project demonstrated efficacy in this with zero newborn falls throughout the implementation period. Patient satisfaction is also a quality improvement metric measured by the hospital. Per feedback from the nursing staff, patients were overall receptive of the education, were attracted to the visual component, and provided positive feedback. Each of these components demonstrates a factor of patient satisfaction that relates back to the overall performance of the healthcare system. In addition to patient satisfaction, meeting quality improvement metrics can

have a significant impact on reimbursement for the healthcare system. This will have a positive financial effect, in comparison to the cost associated with a fall, such as imaging and increased hospital stays that may not be subject to reimbursement.

### **Sustainability**

The sustainability of this project depended on the interest and involvement of the healthcare organization, as well as the nursing staff. The project site champion verbalized interest in continuing the implementation of the patient education handout and eliminating the use of the previous educational material on the unit, pending official approval of the organization. Most of the verbal feedback from the nursing staff regarding the tool was positive, verbalizing the desire to continue the use of the tool. There was some feedback provided from nurses that they did not agree with the education provided in the handout, though adapted directly from the American Academy of Pediatrics (AAP) guidelines, indicating the opportunity for further education of the staff.

Per the project site champion, if the project was to be adopted by the organization, the project handout and wall poster would be approved for ongoing printing at the organization's print shop. However, there would need to be additional processes established to assess utilization and monitor good catch events.

### **Dissemination Plan**

The project was disseminated via submission to the University Scholarship repository to share findings and facilitate interest in replicating or expanding the project in other healthcare organizations. Additionally, verbal and visual presentations were delivered to the faculty at the university, the project site's systemwide research committee, and the system's quality improvement committee. Each of these presentations will reach key stakeholders by sharing

project processes and findings. These presentations also provide opportunities to promote additional research and implementation. Additionally, the potential for dissemination via presentation at an AWHONN conference was considered, as this reaches the target audience of nurses providing direct care to neonates and their parents in the mother-baby setting.

## **Section VI. Conclusion**

### **Limitations and Facilitators**

Primary limitations of project implementation included staff participation and system restrictions. Factors that may have contributed to low participation include a lack of staff buy-in with the project, increased patient census, increased nurse workload, staff turnover, and contract staff in the department. The incentive program had a slight impact on staff participation rates. However, the benefit of incentives did not outweigh the cost and raised concerns about sustainability. Additionally, system restrictions limited the ability to make changes to the project during the implementation stage. For example, the recommendation to include a documentation element in the electronic medical record (EMR) for the nurses to document the use of the tool was made. Due to the short time frame of the project and information technology (IT) priorities, the documentation element was not able to be included, which would have eliminated the feedback tool.

Facilitators of project success were buy-in from major stakeholders, including leadership in the organization and on the unit. The organization supported any initiatives that aligned with the patient safety campaign. This project sought to do that by seeking to decrease the risk of newborn falls. Additionally, newborn falls were a quality metric included in organizational quality scores, making this project a priority as the organization sought to decrease the incidence of falls. The project site champion and unit leadership verbalized that there was a need for consistent education processes, especially with increased patient volumes, nurse turnover, and contract staff on the unit. The project site champion reiterated the importance of implementing this in the project site, as well as all other mother-baby units within the healthcare organization.

### **Recommendations for Others**

To improve staff participation, as well as facilitate ease of data collection regarding the utilization of handouts and tracking project outcomes, one recommendation is to incorporate the tools in the EMR and electronic data reporting systems. For example, an efficient way to facilitate tracking of patient education delivery and handout utilization is to incorporate the tools into the EMR and electronic data reporting systems. Nurses frequently document care plans and the review of certain education content with patients in the medical record. A suggestion is that the organization incorporate a “yes/no” toggle button for nurses to document once reviewed. This will encourage nurse participation in reporting that education has been provided to parents in their daily documentation, as well as increase accountability for education delivery. Additionally, audit reports to assess nurse education compliance could be generated by the system.

The digital reporting component may also be helpful in promoting reporting of good catch events. Many organizations, including the project site, have a program for filing incident reports. The organization can use a similar program for staff to provide report of good catches and details regarding the incidences. However, it is imperative that the organization ensure that staff understand that reporting does not result in punitive action, but that their participation would provide feedback and opportunities for change to improve the processes. The organization may also implement staff recognition of reporting and interventions, as this will promote staff involvement and encourage real-time interventions and reeducation to further reduce the risk of infant falls.

Patients and staff both provided positive feedback regarding the visual aspect of the patient education handout. A recommendation includes expanding on this and increasing the size of the poster in the room, and distributing handouts in other care areas where patients may see it,



such as the NICU and labor and delivery. Another recommendation is to make a copy accessible through the patient portal. Patients may download the handout to their phone so that they have access to it at all times and may share it with others that may be caring for their newborn upon discharge. This increases community knowledge and awareness of guidelines, positively impacting public health and reaching further past the inpatient setting for preventing newborn falls and drops.

Finally, a very important consideration to be made is to provide the educational handout in multiple languages. The handout was only developed in English due to time and approval constraints, with the intention of utilizing interpreters to translate the material. However, several nurses provided verbal feedback regarding the need to have the handout available for further review of patients in different languages, primarily Spanish. This increases the populations reached and will assist in eliminating cultural barriers to healthcare as well as disparities in newborn falls amongst minority populations.

### **Recommendations for Further Study**

In evaluating the need to expand on the clinical knowledge and implications of this project, additional projects and studies are recommended. After applying the recommendations for changes in project design, this project may be easily replicated amongst other mother-baby units within the same healthcare organization, as well as those with similar patient populations and staffing models. Replication in other settings where infants are at risk of drops is recommended, such as the neonatal intensive care unit (NICU), special care nursery (SCN), pediatric intensive care unit (PICU), pediatric medical-surgical inpatient units, and the pediatric emergency department. Different verbiage may be indicated depending on the environment of

care and equipment availability. This project has the potential to reach a broad target audience and impact the outcomes of newborns in a variety of care areas.

With the potential for replication of this project, there is ample opportunity to develop additional projects to build on the knowledge gained from this project. For example, the literature supports the use of a comprehensive newborn care bundle as an effective intervention for newborn fall prevention. Safe sleep education is recommended as a component of the bundle. However, there are many other components, such as maternal rest periods and staff recognition programs for good catch events (Miner, 2019). This project supports the safety and efficacy of the safe sleep education portion of the bundle. Additional studies may combine this tool with a maternal rest program to determine the efficacy of the two interventions used in combination in comparison to education alone. Further studies may also focus on using the same safe sleep education delivery method to provide education to new parents in the pediatric outpatient setting with the goal of preventing sudden unexplained infant death (SUID) or sudden infant death syndrome (SIDS).

### **Final Thoughts**

This project developed and evaluated a safe sleep education program with the goal to reduce the risk of newborn falls on a mother-baby unit. Findings demonstrated that the educational handout was effective, with no newborn falls occurring during implementation and no significant increases in good catch events as handout utilization increased. There were several barriers and facilitators that were identified that can guide future implementation and follow-up based on the findings. However, the goals of ensuring newborn safety, standardizing consistent education delivered by the nursing staff, and promoting parental empowerment were met throughout the project implementation. The project's findings supported the efficacy and

sustainability of the intervention and the positive impact on staff performance, patient satisfaction, and, most importantly, newborn safety.

### References

- The Association of Women's Health, Obstetric, and Neonatal Nurses [AWHONN]. (2020).  
Prevention of newborn falls/drops in the hospital: AWHONN practice brief number 9.  
*Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 49(5), 500-502. doi:  
10.1016/j.jogn.2020.06.004
- Centers for Disease Control and Prevention. (2021, April 28). *Sudden unexpected infant death  
and sudden infant death syndrome: Data and statistics*.  
<https://www.cdc.gov/sids/data.htm>
- The Deming Institute. (2022). *PDSA cycle*. <https://deming.org/explore/pdsa/>
- Duthie, E. A. (2020). In-hospital newborn falls associated with a sleeping parent: The case for a  
new paradigm. *Hospital Pediatrics*, 10(12), 1031-1037. doi: 10.1542/hpeds.2020-0112
- Ely, D. M., & Driscoll, A. K. (2021). Infant mortality in the United States, 2019: Data from the  
period linked birth/infant death file. *National Vital Statistics Reports*, 70(14), 1-17.  
<https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-14.pdf>
- Indeed. (n.d.-a). *Nursing assistant salary in Raleigh, NC*.  
[https://www.indeed.com/career/nursing-assistant/salaries/Raleigh--NC?from=top\\_sb](https://www.indeed.com/career/nursing-assistant/salaries/Raleigh--NC?from=top_sb)
- Indeed. (n.d.-b). *Registered nurse salary in Raleigh, NC*.  
[https://www.indeed.com/career/registered-nurse/salaries/Raleigh--NC?from=top\\_sb](https://www.indeed.com/career/registered-nurse/salaries/Raleigh--NC?from=top_sb)
- Institute for Healthcare Improvement (2022). *How to improve*.  
<http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>

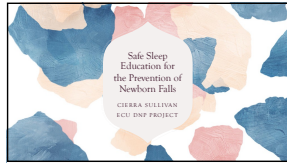
- Karlsson, K., Makatura, J., & Mulkey, D. (2021). Implementing a maternal rest bundle to prevent newborn falls. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 50*(5), 621-631. doi: 10.1016/j.jogn.2021.06.005
- Knipper, N. P., DiCoccio, H. C., & Albert, N. M. (2021). What a catch: Safety Intervention to reframe newborn falls and drops. *MCN: The American Journal of Maternal/Child Nursing, 46*(3), 161-167. doi: 10.1097/NMC.0000000000000708
- Lipke, B., Gilbert, G., Shimer, H., Consenstein, L., Aris, C., Ponto, L., Lafaver, S., & Kowal, C. (2018). Newborn safety bundle to prevent falls and promote safe sleep. *MCN: The American Journal of Maternal/Child Nursing, 43*(1), 32-37. doi: 10.1097/NMC.0000000000000402
- Loyal, J., Pettker, C. M., Raab, C. A., O'Mara, E., & Lipkind, H. S. (2018). Newborn falls in a large tertiary academic center over 13 years. *Hospital Pediatrics, 8*(9), 509-514. <https://doi.org/10.1542/hpeds.2018-0021>
- Melnyk, B. M., & Fineout-Overholt, E. (2011). *Evidence-based practice in nursing & healthcare: A guide to best practice* (2<sup>nd</sup> ed.). Wolters Kluwer Health.
- Miner, J. (2019). Implementation of a comprehensive safety bundle to support newborn fall/drop event prevention and response. *Nursing for Women's Health, 23*(4), 327-339. doi: 10.1016/j.nwh.2019.06.002
- Newberry, J. A. (2019). Creating a safe sleep environment for the infant: What the pediatric nurse needs to know. *Journal of Pediatric Nursing, 44*, 119-122. <https://doi.org/10.1016/j.pedn.2018.12.001>



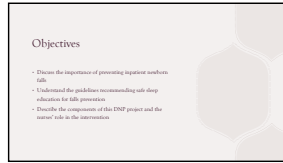
Appendix A

Educational Presentation for Nurses

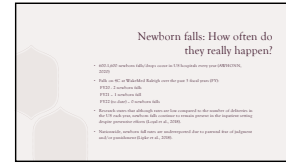
7/10/22



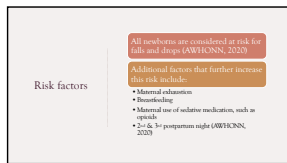
1



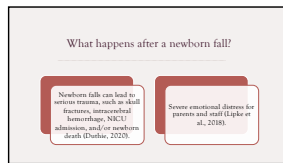
2



3



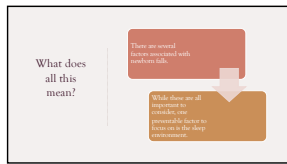
4



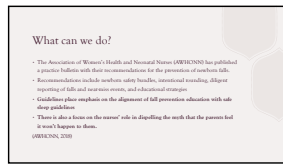
5



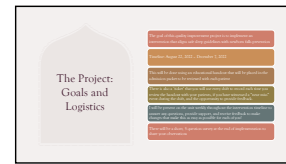
6



7



8



9

1



10



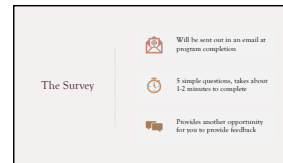
11



12



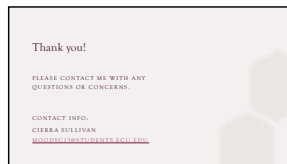
13



14



15



16



17

1

### Appendix B

### Patient Education Handout

## PREVENTING NEWBORN FALLS: HOW YOU CAN PROTECT YOUR NEW BABY

..... *Did you know?* .....



600 – 1,600 newborn falls occur in US hospitals every year



Many falls happen when newborns are sleeping in a parent's bed

..... *What can you do to protect your baby?* .....

### SAFE SLEEP, EVERY TIME!



PLACE YOUR BABY ON HIS / HER BACK TO SLEEP



NEVER SLEEP IN YOUR BED WITH BABY



PLACE BABY ON A FIRM, FLAT SURFACE ( BASSINET ) TO SLEEP



NO SOFT OBJECTS OR LOOSE BLANKETS IN THE BASSINET

**REMEMBER, IT CAN HAPPEN TO ANYONE!**

Scan the QR code to hear a pediatrician's firsthand experience with infant loss related to co-sleeping



Journal of Pediatric Health Care, Volume 30, Number 1, February 2015. DOI: 10.1016/j.pedch.2014.08.012  
The Association of Pediatric Health Care and Hospital Pediatrics (AHPHC) is a member of the American Hospital Association (AHA). AHPHC is a not-for-profit organization. © 2015 American Hospital Association. All rights reserved. AHPHC, 300 N. LaSalle Street, Chicago, IL 60610-3902  
Lambert, J., Pender, C., M. Baskin, C., O'Mara, E., & Lippert, R. (2015). Newborn falls: a long history, a modern crisis. Hospital Pediatrics, 35(1), 30-33. http://dx.doi.org/10.1016/j.hpl.2014.11.001  
Marr, S. J., Corbin, R. F., Bland, J. A. P. (2015). Safe Sleep for Infants and Toddlers. © AAP Committee on Pediatric Practice. (2015) http://www.aap.org/child/infant-toddler/2015/02/01/safe-sleep-for-infants-and-toddlers



**Appendix C**

**Utilization/Feedback Report Tool**

Newborn Falls Prevention DNP Project

*Utilization and Feedback Tool*

Date/Shift Worked: \_\_\_\_\_

How many times did you review the *Newborn Falls Prevention* handout during your shift? \_\_\_\_\_

Feedback: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Did you witness any “good catch” events today? \_\_\_\_\_  
*(Examples: Parents sleeping in bed with baby, baby sleeping on hospital bed, loose blankets/toys in the bassinet, etc.)*

If so, how many? \_\_\_\_\_  
*Please feel free to provide more information regarding the details surrounding the event on the back of this card*

Thank you for all that you do and for your help with this project!



## Appendix D

### Post-Survey for Nurses

**Question 1: Did you use the Newborn Falls Prevention handout provided to provide education regarding newborn fall prevention at any point during the project implementation period?**

Answer choices: Yes, No

**Question 2: Prior to the intervention, how often did you observe parents that were not following safe sleep guidelines?**

Answer choices: Never, A few times per year, a few times per month, a few times per week, every shift

**Question 3: After the intervention, did you observe any changes in parental adherence to safe sleep guidelines?**

Answer choices: No change, more than before, less than before

**Question 4: Would you like to continue using this handout as a guide to educate parents on newborn fall prevention?**

Answer choices: Yes, No

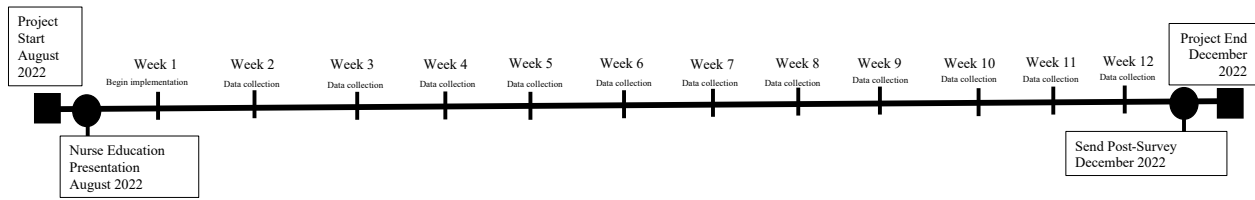
**Question 5: Please provide any feedback you may have on the project or any of its components.**

Free text response.



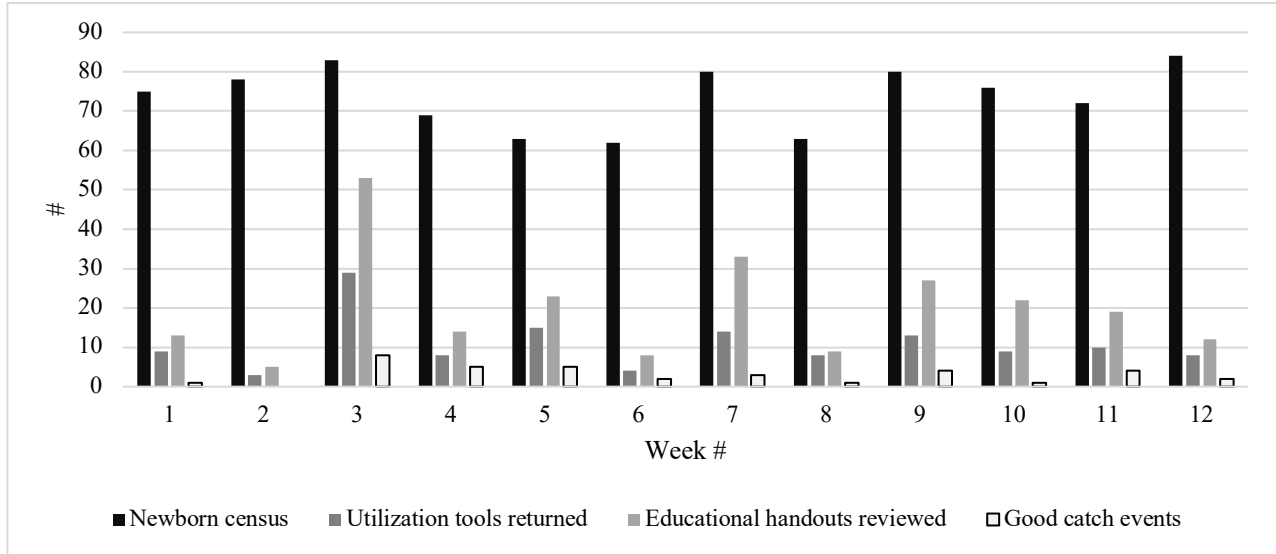
## Appendix F

### Project Timeline



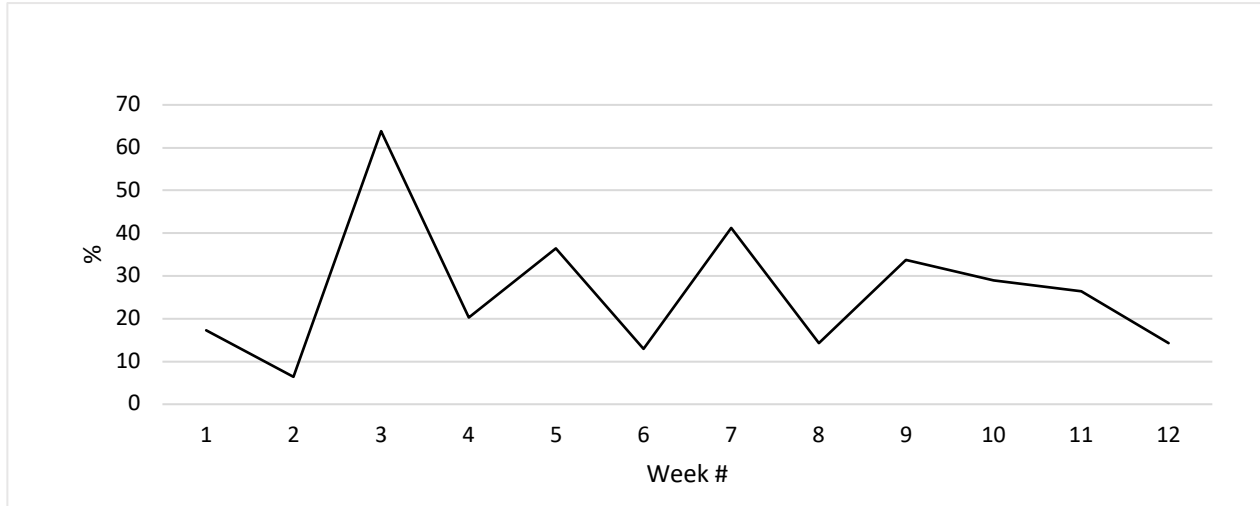
Appendix G

Data Collected Throughout Implementation



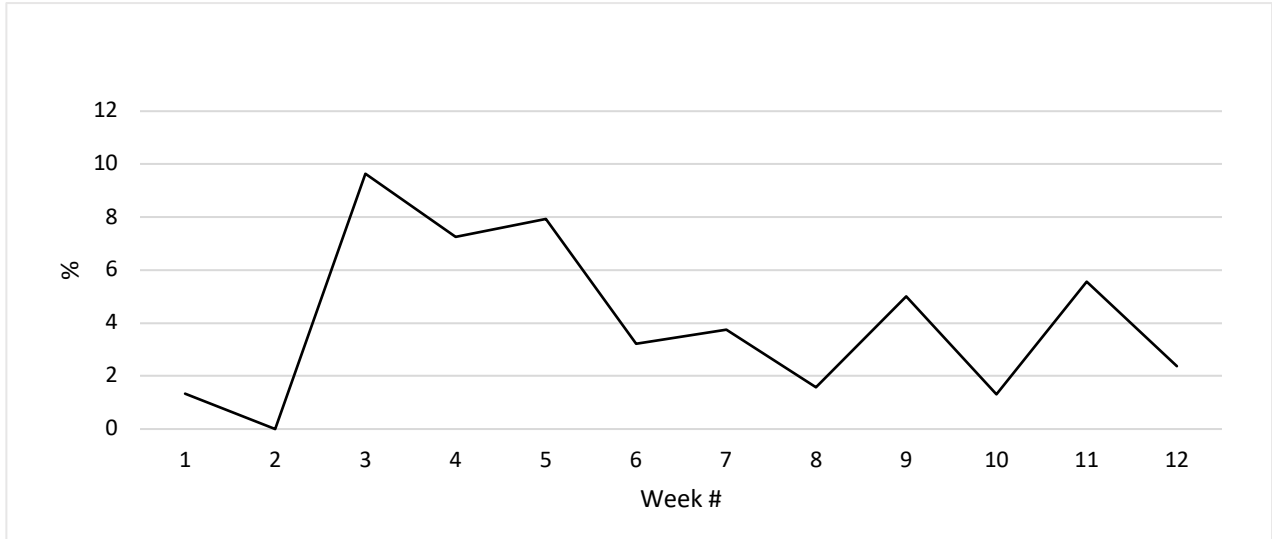
**Appendix H**

**Utilization of Patient Education Handout vs. Newborn Census**



Appendix I

Rate of Good Catch Events vs. Newborn Census



## Appendix J

### Project Budget

Item	Cost	Quantity	Total
Patient Education Handouts & Utilization tools	\$250.00/3 weeks	4	\$1,000.00
Collection box	\$15.00	1	\$15.00
Participation Incentive	\$10.00	6	\$60.00
RN Salary	\$38.00/hr.	24 hours/ day x 7 days/week x 12 weeks	\$76,608
Nurse Tech Salary	\$16.00/hr.	24 hours/ day x 7 days/week x 12 weeks	\$32,256
<b>Total</b>			<b>\$109,939</b>



## Appendix K

## Doctor of Nursing Practice (DNP) Essentials

	Description	Demonstration of Knowledge
Essential I <i>Scientific Underpinning for Practice</i>	<p><b>Competency</b> – Analyzes and uses information to develop practice</p> <p><b>Competency</b> -Integrates knowledge from humanities and science into context of nursing</p> <p><b>Competency</b> -Translates research to improve practice</p> <p><b>Competency</b> -Integrates research, theory, and practice to develop new approaches toward improved practice and outcomes</p>	<ul style="list-style-type: none"> <li>- Collected data during project implementation, evaluated data and made recommendations for clinical practice based on findings.</li> </ul>
Essential II <i>Organizational &amp; Systems Leadership for Quality Improvement &amp; Systems Thinking</i>	<p><b>Competency</b> –Develops and evaluates practice based on science and integrates policy and humanities</p> <p><b>Competency</b> –Assumes and ensures accountability for quality care and patient safety</p> <p><b>Competency</b> -Demonstrates critical and reflective thinking</p> <p><b>Competency</b> -Advocates for improved quality, access, and cost of health care; monitors costs and budgets</p> <p><b>Competency</b> -Develops and implements innovations incorporating principles of change</p> <p><b>Competency</b> - Effectively communicates practice knowledge in writing and orally to improve quality</p> <p><b>Competency</b> - Develops and evaluates strategies to manage ethical dilemmas in patient care and within health care delivery systems</p>	<ul style="list-style-type: none"> <li>- Recommended implementation of safe sleep education to promote newborn safety</li> <li>- Completed all required steps of project approval to ensure patient safety and adherence to organizational guidelines</li> </ul>
Essential III <i>Clinical Scholarship &amp; Analytical Methods for Evidence-Based Practice</i>	<p><b>Competency</b> - Critically analyzes literature to determine best practices</p> <p><b>Competency</b> - Implements evaluation processes to measure process and patient outcomes</p> <p><b>Competency</b> - Designs and implements quality improvement strategies to promote safety, efficiency, and equitable quality care for patients</p> <p><b>Competency</b> - Applies knowledge to develop practice guidelines</p> <p><b>Competency</b> - Uses informatics to identify, analyze, and predict best practice and patient outcomes</p> <p><b>Competency</b> - Collaborate in research and disseminate findings</p>	<ul style="list-style-type: none"> <li>- Reviewed literature to determine best practices and develop DNP project based on findings.</li> <li>- Utilized PDSA method to modify interventions during the implementation period.</li> </ul>
Essential IV <i>Information Systems – Technology &amp; Patient Care Technology for the Improvement &amp; Transformation of Health Care</i>	<p><b>Competency</b> - Design/select and utilize software to analyze practice and consumer information systems that can improve the delivery &amp; quality of care</p> <p><b>Competency</b> - Analyze and operationalize patient care technologies</p> <p><b>Competency</b> - Evaluate technology regarding ethics, efficiency and accuracy</p> <p><b>Competency</b> - Evaluates systems of care using health information technologies</p>	<ul style="list-style-type: none"> <li>- Utilized Microsoft excel for data collection and organization</li> <li>- Recommend implementation of data collection tool in EMR to track utilization of the tool in future implementation</li> </ul>

	<b>Description</b>	<b>Demonstration of Knowledge</b>
Essential V <i>Health Care Policy of Advocacy in Health Care</i>	<p><b>Competency-</b> Analyzes health policy from the perspective of patients, nursing and other stakeholders</p> <p><b>Competency</b> – Provides leadership in developing and implementing health policy</p> <p><b>Competency</b> –Influences policymakers, formally and informally, in local and global settings</p> <p><b>Competency</b> – Educates stakeholders regarding policy</p> <p><b>Competency</b> – Advocates for nursing within the policy arena</p> <p><b>Competency-</b> Participates in policy agendas that assist with finance, regulation and health care delivery</p> <p><b>Competency</b> – Advocates for equitable and ethical health care</p>	<ul style="list-style-type: none"> <li>- Provided educational sessions to nursing staff, educated all stakeholders on project processes and goals</li> <li>- Made recommendations for further implementation of the project tools within the organization</li> </ul>
Essential VI <i>Interprofessional Collaboration for Improving Patient &amp; Population Health Outcomes</i>	<p><b>Competency-</b> Uses effective collaboration and communication to develop and implement practice, policy, standards of care, and scholarship</p> <p><b>Competency</b> – Provide leadership to interprofessional care teams</p> <p><b>Competency</b> – Consult intraprofessionally and interprofessionally to develop systems of care in complex settings</p>	<ul style="list-style-type: none"> <li>- Collaborated with organizational leaders, nursing staff, and project site champion throughout project approval and implementation stages.</li> <li>- Worked with organizational research leaders to discuss additions to EMR based on project needs and IT capabilities.</li> </ul>
Essential VII <i>Clinical Prevention &amp; Population Health for Improving the Nation's Health</i>	<p><b>Competency-</b> Integrates epidemiology, biostatistics, and data to facilitate individual and population health care delivery</p> <p><b>Competency</b> – Synthesizes information &amp; cultural competency to develop &amp; use health promotion/disease prevention strategies to address gaps in care</p> <p><b>Competency</b> – Evaluates and implements change strategies of models of health care delivery to improve quality and address diversity</p>	<ul style="list-style-type: none"> <li>- Utilized data from literature to develop project tools based on clinical guidelines</li> <li>- Provided education, recommended in other languages, to address barriers to care in newborn safety</li> </ul>
Essential VIII <i>Advanced Nursing Practice</i>	<p><b>Competency-</b> Melds diversity &amp; cultural sensitivity to conduct systematic assessment of health parameters in varied settings</p> <p><b>Competency</b> – Design, implement &amp; evaluate nursing interventions to promote quality</p> <p><b>Competency</b> – Develop &amp; maintain patient relationships</p> <p><b>Competency</b> –Demonstrate advanced clinical judgment and systematic thoughts to improve patient outcomes</p> <p><b>Competency</b> – Mentor and support fellow nurses</p> <p><b>Competency-</b> Provide support for individuals and systems experiencing change and transitions</p> <p><b>Competency</b> –Use systems analysis to evaluate practice efficiency, care delivery, fiscal responsibility, ethical responsibility, and quality outcomes measures</p>	<ul style="list-style-type: none"> <li>- Designed educational nursing intervention to promote standardized practice and improved patient outcomes</li> </ul>