



innovation hub

AMCHP | *Explore. Build. Share.*



MCH Innovations Database Practice Summary & Implementation Guidance

PA Safe Sleep Program

Evidenced based infant safe sleep program for hospitals using nurse subject matter experts.



Location

Pennsylvania



Topic Area

Injury Prevention & Hospitalization



Setting

Birthing and Children's Hospitals



Population Focus

Infant, Families & Caregivers,
Medical & Public Health
Professionals



NPM

NPM 5: Safe Sleep



Date Added

May 2024

Contact Information

Bonnie Renner Ohnishi, Hospital of the University of Pennsylvania, 267-584-0094,
bohnishi@penmedicine.upenn.edu

Section 1: Practice Summary

PRACTICE DESCRIPTION

Each year, there are approximately 3,400 Sudden Unexpected Infant Deaths (or SUIDS) in the United States. These deaths involve healthy infants under the age of 12 months. Black infants are affected at more than twice the rate of white infants. (CDC, 2023, Retrieved from: <https://www.cdc.gov/sids/>). Many of these deaths could be prevented by following the American Academy of Pediatrics (AAP) recommendations for safe sleep for infants (Moon, AAP Task Force on Sudden Infant Death Syndrome et al., 2022, Retrieved from: <https://doi.org/10.1542/peds.2022-057990>). The PA Safe Sleep program was developed to address this need to reduce the number of SUIDS. Our comprehensive, evidence based, quality improvement program focus is to increase health care providers and childbearing families awareness of infant safe sleep practices during the first year of life with consistent branding and repetitive messages across the entire program. The key populations are maternal child health care providers, infants, and childbearing families. All program materials are available for free for use from <https://www.PASafesleep.org/> This program intends to accomplish a reduction in the number of unexpected infant deaths by (a) promoting infant safe sleep, and (b) educating health care providers, parents and community members on SUIDS that includes Sudden Infant Death Syndrome (SIDS) and non-homicidal strangulation and suffocation risk-reduction activities.

An evidence-based framework was essential to achieve meaningful behavior change. We chose to utilize the Integrated Promoting Action on Research Implementation in Health Services (i-PARIHS) framework (Harvey & Kitson, 2016; Harvey & Lynch, 2017; Kitson & Harvey, 2016; Rycroft-Malone, 2004) to guide the development of our program. See Figure 1. This framework poses successful implementation of any program is a function of the interconnectedness of evidence for innovation, context, recipients, and facilitation. Evidence for the innovation is a function of quality and type of evidence often derived from multiple sources such as research, clinical experience, and patient experience. The evidence must be strong for the intended users to adopt and change behavior. The evidence for our program is strong as it is based on the AAP guidelines for infant safe sleep.

Context is the characteristics of the environment that may support or inhibit the intended practice change. Our context focused on birthing hospitals and children's hospitals that supported the practice change to increase the awareness of infant safe sleep and the reduction of SUIDs, a health outcome of concern to health providers and childbearing families.

The recipients need to be receptive or have a need for the education. The educational intervention must be meaningful to the recipient for behavioral change. Of course, no one wants to experience a sudden infant death. Our program had two recipients, health care providers and childbearing families. Both recipients received that same educational message tailored to their learning needs.

Facilitation is the active element that assesses, aligns, and integrates the three constructs (innovation, context and recipient) to promote the intended behavior change. As the first three tenets associated with our program were very strong, our team poses that facilitation was key to support continued engagement and ultimate behavior change. We structured two levels of facilitation, one with the senior clinical leaders and one with the front-line clinicians. Senior leadership engagement was important so that the safe sleep program implementation remained a departmental priority. Subject Matter Experts (SMEs) served as key facilitators in direct patient care to expeditiously transform and sustain outcomes-driven improvements in infant safe nursing practice.



CORE COMPONENTS & PRACTICE ACTIVITIES

The goal of our quality improvement program is to improve infant safe sleep modeling and education in the hospital setting. A methodology commonly used with quality improvement projects evaluates the three phases of the program including (1) baseline and implementation preparation, (2) implementation, and (3) evaluation. During the baseline and implementation phase we administer staff practice analysis surveys on infant safe sleep to all OB/neonatal hospital staff and conduct infant safe sleep environmental audits to evaluate infant safe sleep environments. The implementation phase consists of training clinical nurses to lead program implementation and sustainment on the front lines of patient care at each participating hospital. Infant safe sleep policies are implemented and consistent with the American Academy of Pediatrics recommendations for infant safe sleep. consists of the completion of infant safe sleep self-learning modules for OB/neonatal staff and provision of infant safe sleep patient education with tools such as wall cling posters, brochures translated into >25 languages, palm cards, an animated video, and crib cards. During the evaluation phase we administer staff “Progress You Made” surveys to assess OB/neonatal staff infant safe sleep practices and repeat the infant safe sleep environmental audits to assess practice change.

Core Components & Practice Activities

Core Component	Activities	Operational Details
<p><u>Baseline and implementation preparation phase:</u></p> <p>1) Provider Knowledge assessment</p>	<p>Assessment of baseline nursing knowledge and adherence to evidence-based and best practices for infant safe sleep, as described by the American Academy of Pediatrics</p>	<p>Baseline Nursing Practice Analysis Survey administered to postpartum and neonatal nurses in the hospital setting.</p>
<p>2) Subject Matter Expert (SME) Leadership Facilitation Preparation</p>	<p>Completion of SME training program</p>	<p>SMEs serve as key facilitators to expeditiously transform and sustain outcomes-driven improvements associated with infant safe sleep practices at the bedside. A one-hour self-learning module is available at www.PASafeSleep.org. at no cost to the learner.</p>
<p>3) Provider Practice Assessment</p>	<p>Environmental Audit of infant sleep environment in the hospital setting</p>	<p>Environmental Audit tool used to assess the safety of infant sleep environments in the hospital setting pre- and post-implementation of the safe sleep model program</p>
<p>4) Infant safe sleep policy</p>	<p>Implementation of nursing infant safe sleep policy</p>	<p>Written nursing infant safe sleep policy to guide practice</p>



<p>Implementation Phase:</p> <p>1) Staff Education</p>	<p>Completion of self-learning modules by staff available at www.PASafeSleep.org.</p>	<p>1) All nurses complete two self-learning modules: “Evidence-Based and Best Practices for Safe Sleep with Newborns” “Teaching Safe Sleep Practices to Mothers, Families and the Community”</p> <p>2) Nurses working in Neonatal Intensive Care Unit complete one additional self-learning module: “Transition to a Safe Home Sleep Environment for the NICU Patient”</p> <p>3) Support staff complete one self-learning module: “Safe Sleep for Newborns - Guidelines for Hospital Support Staff”</p>
<p>1) Patient and Family Education</p>	<p>Distribution of infant safe sleep educational materials to families and display of materials in patients’ rooms</p>	<p>All materials are available and downloadable at no cost from www.PASafeSleep.org</p> <p>1) Safe sleep brochure (available in >26 languages)</p> <p>2) “Alone Back Crib” posters hung in patient rooms</p> <p>3) Poster trio displayed in common areas</p> <p>4) 2-sided palm card featuring safe sleep basics and a QR code linking users to animated safe sleep educational video available at www.PASafeSleep.org.</p> <p>Crib cards featuring safe sleep messaging on one side (for well infants) and explanation of medical exceptions to safe sleep on reverse side (for use in neonatal intensive care units)</p>
<p>Evaluation Phase:</p> <p>1) OB/neonatal staff survey</p>	<p>Assessment of progress made by postpartum and neonatal nurses</p>	<p>Completion of a post-implementation “Progress You Made” survey for nurses to self-report their improvement in knowledge, skill, and comfort in modeling and teaching safe sleep practices after having completed the educational components of the model program.</p>
<p>2) Repeat Provider Practice Assessment</p>	<p>Environmental Audit of infant sleep environment in the hospital setting</p>	<p>Environmental Audit tool used to assess the safety of infant sleep environments in the hospital setting pre- and post-implementation of the safe sleep model program</p>



HEALTH EQUITY

The hospital-based model program, while not directly focusing on areas or groups of greater need, seeks to elevate the awareness and behaviors of infant safe sleep risk reduction practices for parents, families, and providers statewide. Our program has and will continue to engage groups throughout the state that have a higher risk of SUIDs. Currently we have 44 hospitals within the state that are involved in the PA Safe Sleep Program. We will continue to reach out to other hospitals who may want to adapt this program.

We continue to partner with key organizations to maximize our efforts in raising awareness of risks related to unsafe infant sleep environments. During the year 2024, the Pennsylvania Perinatal Quality Collaborative (PAPQC) resourced our PA Safe Sleep Program leadership to help inform a statewide initiative to decrease the number of SUIDs in Pennsylvania. We are committed to continue to collaborate with the PAPQC, Maternity Care Coalition, the city and state Department of Health.

EVIDENCE OF EFFECTIVENESS

Participating hospitals collect pre-implementation data to determine staff baseline knowledge and practice regarding infant safe sleep. A Nursing Practice Analysis Survey that specifically assesses knowledge of infant safe sleep is administered to all nurses who care for infants. An Environmental Audit is conducted to assess the safety of infant sleep environments. The number of audits recommended is equal to 3% of the participating hospital's annual birth rate represented during a 2-month period. During implementation, the number of education modules completed are tallied. The numbers of patients receiving infant safe sleep education are tallied. About 2 months after implementation, post-implementation phase begins, and the SME teams repeat the Environmental Audit to assess the safety of infant sleep environments in the hospital setting. The OB/neonatal nurses complete the Progress You Made Survey to self-assess their improvement in knowledge, skill, comfort, and practice in modeling and teaching safe sleep practices. Qualtrics experience management software is used to administer the surveys and environmental audits. Analysis and synthesis is available through Qualtrics.

The following results represents 33 hospitals spanning 21 counties in Pennsylvania that indicates the effectiveness of the PA Safe sleep quality improvement program.

1) PA Safe Sleep Environmental Audit Tool

Prior to implementation 1,221 environmental audits were completed across participating facilities with 1,317 audits completed after implementation. A chi-square test indicated that a significantly higher proportion of infants were documented in safe sleep positions in the post-implementation period (91.9%) than during the pre-implementation period (89.7%) ($\chi^2 = 4.38$, $df=1$, $p=0.001$) (Table XX). Similarly, a chi-square test indicated that a significantly lower proportion of infants were documented with unsafe items in their cribs in the post-implementation period (17.3%) than during the pre-implementation period (31.3%) ($\chi^2 = 67.0$, $df=1$, $p<.001$).

2) Practice Analysis Survey (906 nurses)

Approximately a third of participants worked in a community hospital setting (34.0%). The majority of nurses participating in the program were 40 years of age or older (52.0%) and female (99.2%) with a bachelor's degree (68.5%) (Table 1). A third of nurses had over 20 years of experience in Labor and Delivery (34.2%) and overall experience as a nurse (41.2%). Few were Lactation Consultants (4.9%). While the majority of nurses reported placing infants in the supine position to sleep often or always (91.2%) there was wide variation in practice with up to 14.0% reporting that they sometimes place infants in prone positions. Further, nearly 1 in 5 nurses reported observing other nurses placing infants in prone positions (19.6%). Additionally, 17.7% of nurses



incorrectly identified that some medical equipment is safe to leave in the infant’s crib while sleeping. Less than half of all nurses reported that they had read the latest American Academy of Pediatrics guidelines.

3) Progress You Made Survey (827 nurses)

Overall feedback on the follow up Progress You Made survey illustrated that nurses gained knowledge and confidence following implementation. For example, 74.4% responded that they felt they had acquired substantial or exceptional factual knowledge about sleep-related deaths in infants and 78.1% reported they had substantial or exceptional understanding of environmental risks sleep-related death in infants. Similar trends were seen across other domains (Table 2). Up to 83.4% of nurses across participating facilities reported they were now substantial or exceptional at being more proactive in surveillance of safe sleep environments. Similarly, 80.7% of participants reported that they were substantially or exceptionally more confident in utilizing instructional methods for mothers and family members to promote safe sleep practices and environments, and 83.1% felt similar in regard to taking corrective actions to promote safe sleep environments for infants.



Section 2: Implementation Guidance

COLLABORATORS AND PARTNERS

The program leadership team consisting of the Program Director, Project Coordinator, and two Senior Project Leaders/Clinical Directors meet weekly to discuss all program operations and ideas for improvement. This team also meets monthly with team members from the Maternity Care Coalition to strategize community outreach efforts, development of new materials, and website maintenance. On-going input is solicited from members of the community advisory board. Nursing leaders from enrolled hospitals participate in monthly virtual meetings with program leadership to facilitate implementation and sustainment of the program. Ongoing communication with Safe Sleep SMEs is achieved via an email group maintained by the Project Coordinator. The SMEs at each hospital work together as an autonomous team to ensure engagement among their clinical nursing colleagues. Frontline clinical nurses maintain engagement with families of infants utilizing their knowledge and communication skills and the patient education resources provided by the program.

Practice Collaborators and Partners

Partner/ Collaborator	How are they involved in decision-making throughout practice processes?	How are you partnering with this group?	Does this stakeholder have lived experience/come from a community impacted by the practice?
Pennsylvania Department of Health	Our project officer at the PA Department of Health must approve all components of the model program.	The Bureau of Family Health within the PA Department of Health provides Title V funding to support the creation, implementation, expansion, and sustainment of this program.	No. The PA Department of Health is a government agency. The Bureau of Family Health which manages the Title V Block Grant is committed to improving the health and well-being of the Pennsylvania's mothers, children, and families.
University of Pennsylvania School of Nursing	Two faculty members from the University of Pennsylvania School of Nursing lead our project team. Our Program Director is a Women's Health Nursing professor, and our Co-director is a Nurse Scientist from the School of Nursing.	The faculty members provide academic support, assisting in data analysis and the creation of evidence-based evaluation tools and educational materials for our populations of focus.	Yes. These faculty members have been providing care to childbearing families in the hospital and community setting for decades. They have been caregivers of infants and childbearing families.



<p>Women’s and Children’s Health Nursing Leadership at Participating Hospitals</p>	<p>Clinical Directors meet with Program Leadership to learn about the program and make the decision to enroll. They choose staff to receive specialized training to lead implementation as Safe Sleep SMEs.</p>	<p>Clinical Directors and Nurse Managers are invited to participating in monthly virtual meetings to discuss program implementation progress, barriers, and successes.</p>	<p>Yes. The nurse leaders oversee operations of the units that care for infants and birth parents and families.</p>
<p>Maternity Care Coalition (MCC)</p>	<p>The MCC staff designed patient education materials and held focus groups with parents of infants to get their input and perspective regarding these materials. Materials were modified accordingly.</p>	<p>Maternity Care Coalition staff and leadership were core members of the project development team. We continue to meet with them monthly.</p>	<p>Yes. MCC has a mission to improve the health and well-being of pregnant women and parenting families and enhance school readiness for children up to age 3. This community health organization works with families throughout Southeastern Pennsylvania, focusing particularly on neighborhoods with high rates of poverty, infant mortality, health disparities, and changing immigration patterns.</p>
<p>Community Advisory Board</p>	<p>The program leadership met with community advisory board members monthly during the first year of program development and implementation. The board provided valuable input and feedback on the development and evaluation of the program.</p>	<p>Program leadership attended the monthly First Thursday meeting held at the Walnut Street Library open to all members of the community for continued feedback on the program.</p>	<p>Yes. These members consisted of community leaders, parents, and families of infants from the local community.</p>
<p>Maternity, Neonatal, and Pediatrics healthcare providers</p>	<p>Healthcare professionals caring for infants and their families provide safe sleep education using a conversations approach using the R.E.A.C.H. to Teach method for making patient education “stick”. R.E.A.C.H. is an acronym that stands for:</p>	<p>The Project Coordinator is a Maternal Newborn Nurse. She teaches other nurses and allied healthcare providers to be Safe Sleep SMEs. These SMEs, in turn, lead the program implementation activities on their</p>	<p>Maternity, Neonatal, and Pediatrics healthcare providers</p>



- 1) Relate to patient and family
- 2) Educate simply
- 3) Ask and answer questions
- 4) Check for understanding (teach-back method)
- 5) Help promote health literacy

This allows providers to assess knowledge, availability of resources, and intent to practice safe sleep. Providers then tailor education and referrals to additional resources based on need.

nursing units. All nurses and support staff working with infants at participating hospitals complete the self-learning modules, which help to inform their practice and educational efforts in promoting safe sleep. The Project Coordinator maintains engagement through an email group, which includes SMEs from all participating hospitals.

REPLICATION

As of March 2024, 23 additional recruited hospitals have fully implemented our model program and completed pre- and post-implementation program evaluation. Another 14 hospitals are currently in the process of implementing and evaluating the model program at their facilities.

The following pre- and post-implementation comparative findings represent 7 hospitals who completed their Post-Implementation Environmental audits between January 2022 and December 2022.

- 1) Practice improved during the post implementation period. In most instances, no mothers were found sleepy while holding their infant. The number of mothers sleepy holding their infants decreased from 6% (n=10) to 2% (n= 8). The proportion of mothers asleep holding their infants decreased slightly 2% (n=4) to 1% (n= 4) respectively. The number of mothers asleep and side lying while holding their infants decreased from 3% (n=5) to 1% (n= 1) respectively.
- 2) The majority of infants were in safe sleep positions during audits, 88% (n=179), 85% (n=155) respectively. During the post implementation period, infants found not midline in the crib, side lying, or prone or in their mother's bed increased slightly 12% (n= 23) infants 15% (n=50) respectively. This is an area of opportunity for further practice improvement.
- 3) More infants were observed with the head of their bed flat during the post (82%, n=257) versus the pre (64%, n=122) periods.
- 4) Swaddling practices improved with fewer unsafe practices during the post-implementation period. During the pre-implementation period, 19% (n=40) of infants were swaddled with the face/head and/or neck covered. During the post-implementation period, 15% (n=47) of infants were swaddled with the face/head and/or neck covered.



The following findings represent 7 hospitals who completed their Post-Implementation Progress You Made surveys between January 2022 and December 2022.

- 1) 71% of respondents believed they acquired substantial or exceptional factual knowledge about infant sleep-related deaths. 24% of respondents believed they acquired moderate knowledge indicating that 95% of nurses gained knowledge about infant sleep-related deaths after taking the modules.
- 2) 77% of respondents believed they acquired substantial or exceptional knowledge about risks for infant sleep-related deaths. 19% of respondents believed they acquired moderate knowledge indicating that 96% of nurses gained knowledge about risks associated with infant sleep-related deaths after taking the modules.
- 3) 73% of respondents believed they acquired substantial or exceptional knowledge about research on infant sleep-related deaths. 23% of respondents believed they acquired moderate knowledge indicating that 96% of nurses gained knowledge about research associated with infant sleep-related deaths after taking the modules.
- 4) 80% of respondents believed they were able to be substantially and exceptionally more proactive in surveillance of safe sleep environments. 17% of respondents believed they were moderately more proactive indicating that 97% of nurses were more proactive in the surveillance of safe sleep environments after taking the modules.
- 5) 72% of respondents believed they were substantially and exceptionally able to access and use resources to support safe sleep practices. 23% of respondents believed they were moderately able to find resources indicating that 95% of nurses were able to access and use resources to support safe sleep practices proactively after taking the modules.
- 6) 81% of respondents believed they were substantially and exceptionally able to apply evidence-based guidelines for safe sleep in the clinical setting. 16% of respondents believed they were moderately able to apply the guidelines clinically indicating that 97% of nurses were able to apply evidence-based guidelines for safe sleep in the clinical setting after taking the modules.
- 7) 79% of respondents believed they were substantially and exceptionally more confident in implementing teaching methods with mothers and families regarding safe sleep practices. 17% of respondents believed they were moderately more confident indicating that 96% of nurses were more confident in implementing teaching methods with mothers and families regarding safe sleep practices after taking the modules.
- 8) 81% of respondents believed they were substantially and exceptionally more able to take corrective actions to promote infant safe sleep environments. 17% of respondents believed they were moderately more able indicating that 98% of nurses were more able to take corrective actions to promote infant safe sleep environments after taking the modules.

These findings are similar to our findings at our two pilot hospitals.

In 2022, we enrolled two children's hospitals. Prior to that point, only birthing hospitals participated in our program. We found we needed to adjust our Environmental Audit tool to accommodate this type of clinical setting. For example, we added options to indicate when an infant was in a sitting device and when feedback was provided to an infant's primary nurse.



INTERNAL CAPACITY

Key personnel and materials needed for program implementation include:

- a. support from the hospital leadership team
- b. project coordinator, ideally a subject matter expert
- c. front line clinical nurses trained to be subject matter experts
- d. A data management system such as Red Cap or Qualtrics and personal who are familiar with using these programs
- e. Availability of infant safe sleep self-learning modules that could be downloaded into a learning management system
- f. Infant safe sleep educational materials for distribution to families
- g. cling posters on walls in patients' rooms and common areas.

PRACTICE TIMELINE

Phase: Planning/Pre-Implementation		
Activity Description	Time Needed	Responsible Party
Provider Knowledge assessment using Nursing Practice Analysis Survey	1 months	Program educator
Training of Subject Matter Experts	1 month	Project Coordinator/Educator
Provider Practice Assessment using Environmental audits	2 months	Subject matter experts
Infant safe sleep policy	2-3 months	Subject matter experts

Phase: Implementation		
Activity Description	Time Needed	Responsible Party
Staff education on infant safe sleep via self-learning modules	3 months	Subject matter experts



Patient and family education	continually	Clinical nurse
Cling signage in patient rooms and common areas	1 month	Subject matter expert

Phase: Sustainability

Activity Description	Time Needed	Responsible Party
Repeat provider practice assessment using environmental audits	3 months	Subject matter experts
OB/neonatal staff survey using Progress you made survey	2 months	Nursing staff

PRACTICE COST

Budget

Activity/Item	Brief Description	Quantity	Total
Subject matter expert (SME) training	Virtual 4-hour course on infant safe sleep SME role	3-10 nurses	Varies based on hourly rate
Print materials (pamphlets, wall clings)	Brochures for patient distribution and cling wall posters for patient rooms and common areas	Depends on anticipated annual births and number of patient rooms and common areas	Brochures ranges from \$700-1500 annually) Posters ranges from \$240-1300, one time cost)



Data management	Data analysis, synthesis, and dissemination	1 statistical consultant	\$3000 annually or in kind if available within health care system.
Total Amount:			\$5800.00

LESSONS LEARNED

Importantly, we learned that the SME model is effective for implementing and sustaining a Quality Improvement (QI) initiative. Findings on the effectiveness of this model were published in a highly regarded peer review journal (Stringer, M., Ohnishi, B., Ferrarello, D., Lazzeri, J., Giordano, N., & Polomano, R., (2022) Statewide infant safe sleep program and nurse subject matter experts. *MCN: The American Journal of Maternal Child Nursing*, 47(6):337-344).

We have also learned various factors may confound drawing conclusions on the effectiveness of this program in reducing the number of SUIDs. Firstly, it is difficult to obtain and compare SUID data due to differences in classification of these deaths locally, statewide, and nationally. Although locally or state-wide a trend in decreasing the number of SUIDs maybe noted, the numbers are too small to draw conclusions regarding the downstream effect of an education program. Additionally, contributing and confounding factors such as the COVID 19 pandemic and the nursing shortage may influence these findings.

NEXT STEPS

Our goal is to have this program available free to any user (locally, state-wide, nationally and globally). The resources are and will be available for any user for program implementation. We will continue to upgrade and monitor the traffic our program website.

RESOURCES PROVIDED

- Lazzeri, J., Giordano, N., Christ, L., Polomano, R. C., & Stringer, M. (2023). Hats off for full-term healthy newborns. *Journal of Perinatal Neonatal Nursing*.37(4), 340-347.
- Moon, R. Y., Carlin, R. F., Hand, I., American Academy of Pediatrics Task Force on Sudden Infant Death & American Academy of Pediatrics Committee on Fetus and Newborn. (2022a). Evidence base for 2022 updated recommendations for a safe infant sleeping environment to reduce the risk of sleep-related infant deaths (Technical Report). *Pediatrics*, 150(1), e2022057991. <https://doi.org/10.1542/peds.2022-057991>
- Moon, R. Y., Carlin, R. F., Hand, I., American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome & American Academy of Pediatrics Committee on Fetus and Newborn. (2022b). Sleep-related infant deaths: Updated 2022 recommendations for reducing infant deaths in the sleep environment (Policy Statement). *Pediatrics*, 150(1), e2022057990. <https://doi.org/10.1542/peds.2022-057990>

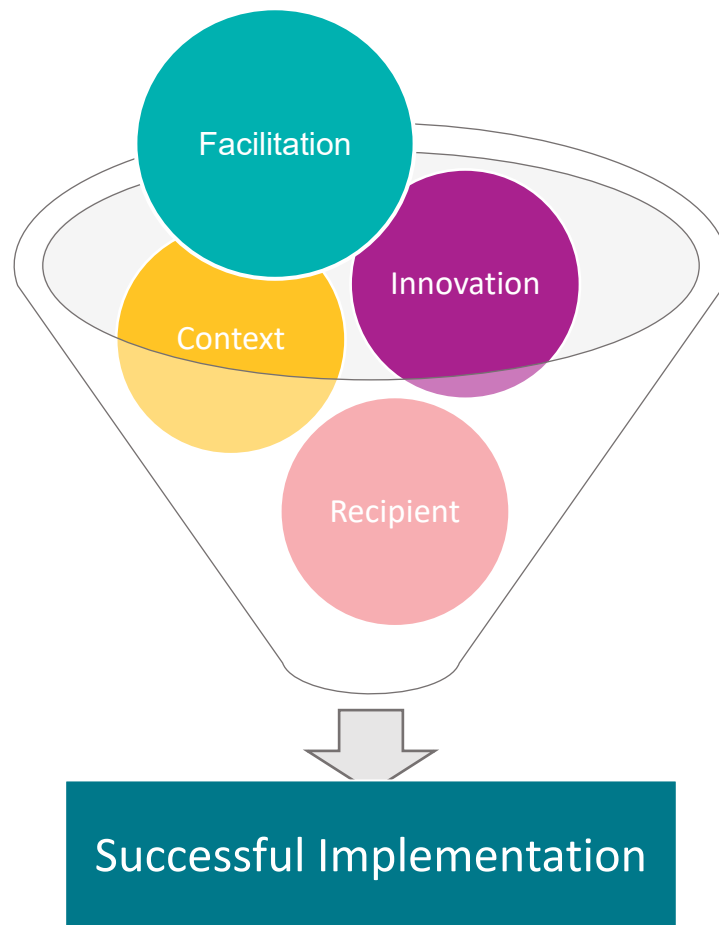


Rycroft-Malone, J. (2004). The PARIHS framework - A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality*, 19(4), 297–304. <https://doi.org/10.1097/00001786-200410000-00002>

Stringer M., Ohnishi, B., Ferrarello, D., Lazzeri, J., Giordano, N., & Polomano, R. (2022). Subject matter expert nurses in safe sleep program implementation. *MCN: The American Journal of Maternal Child Nursing*, 47(6), 337-344. <https://doi.org/10.1097/NMC.0000000000000859>

APPENDIX

Figure 1: Integrated Promoting Action on Research Implementation in Health Services (i-PARIHS) Adapted from Harvey Kitson (2016)



- *Note.* Innovation is a function of quality and type of evidence and must be strong for the intended users to adopt and change behavior. Context is the characteristics of the environment that may support or inhibit the intended practice change. Our program was situated within the birthing facility and communities where childbearing families resided. The recipients need to be receptive or have a need for the education for behavioral change related to safe infant sleep to occur. Facilitation is the active element that assesses, aligns, and integrates the three constructs (innovation, context and recipient) to promote the intended behavior change.

