

The University of San Francisco

USF Scholarship: a digital repository @ Gleeson Library | Geschke Center

Master's Projects and Capstones

All Theses, Dissertations, Capstones and
Projects

Summer 8-4-2024

Reducing HAPI on a Medical Surgical Telemetry Unit

Emily Nicole Johansen

University of San Francisco, emilyjohansen@gmail.com

Follow this and additional works at: <https://repository.usfca.edu/capstone>



Part of the [Geriatric Nursing Commons](#), [Nursing Administration Commons](#), and the [Other Nursing Commons](#)

Recommended Citation

Johansen, Emily Nicole, "Reducing HAPI on a Medical Surgical Telemetry Unit" (2024). *Master's Projects and Capstones*. 1733.

<https://repository.usfca.edu/capstone/1733>

This Project/Capstone - Global access is brought to you for free and open access by the All Theses, Dissertations, Capstones and Projects at USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. It has been accepted for inclusion in Master's Projects and Capstones by an authorized administrator of USF Scholarship: a digital repository @ Gleeson Library | Geschke Center. For more information, please contact repository@usfca.edu.

N660 Evidence-Based Improvement Project Prospectus

Adapted from Squire 2.0 Guidelines

Reducing HAPI on a Medical Surgical Telemetry Unit

Emily Johansen, BSN, RN

University of San Francisco

Instructor: Dr Dave Ainsworth

Abstract

Problem: Hospital-acquired pressure injuries (HAPI) are a global issue that harms patients, prolongs lengths of stay, and increases hospital costs and financial burdens. Because HAPIs are preventable, hospital organizations worldwide are implementing prevention strategies to improve the quality of care and quality of life and decrease costs associated with them.

Context: The 24-bed medical-surgical telemetry unit is one of five adult inpatient units within a Northern California hospital. The patient population includes an increased number of patients who are at risk of HAPI. The unit struggles with HAPI prevention, and the staff is challenged with implementing proper HAPI prevention strategies.

Interventions: A HAPI committee was formulated and tasked with developing a quality improvement project to address the increased number of HAPIs. The project's interventions aim to implement a static overlay mattress for all patients at high risk of HAPI. Other interventions include staff education and training, continued use of current HAPI prevention strategies, and early identification and escalation of at-risk patients.

Measures: The measures for this project were the implementation of the static overlay mattress for patients with a Braden Score of 18 and less, documentation of PLOF and CLOF within 8 hours of admission, and documentation of a Braden assessment within 8 hours of admission.

Results: Implementing the waffle overlay mattress for patients at high risk for skin injury led to decreased HAPI occurrences.

Conclusions: Standardizing the waffle overlay mattress as part of the HAPI bundle led to a 34% decrease in HAPI occurrences from a baseline of 0.58 per month to 0.33 per month.

Keywords: hospital acquired pressure injuries (HAPI), performance improvement, safe patient care, evidence-based practice, waffle mattress

Personal Leadership Statement

I work as an assistant nurse manager in the medical-surgical telemetry unit in a Northern California trauma hospital. I have been in this role for over 3 years. My goal as a leader in this role is to motivate, inspire, encourage, and empower our staff members to provide high-quality, safe patient care. As a leader and a healthcare provider, I will work toward this vision with all who interact with me professionally or personally. I chose the topic of hospital-acquired pressure injuries (HAPI) because our unit should be where our patients come and know that all measures will be taken to prevent harm and promote their overall well-being. As a leader in this unit, I am responsible for ensuring that safe, quality care is provided to every patient.

Problem Description

In 2023, a medical-surgical telemetry unit in a Northern California trauma hospital faced a critical situation. The rate of HAPI skyrocketed by 300%, from 2 in 2022 to 6 in 2023. This alarming increase in a crucial metric that matters for the unit is a cause for immediate concern. The unit, with its 24 beds and an average population age of 66, is home to 96 staff members, including nurse leaders, nurses, patient care technicians, and unit assistants. Many patients on this unit, due to their involvement in a traumatic event, have experienced a significant decrease in their current level of function (CLOF) from their prior level of function (PLOF). Their low CLOF prevents them from mobilizing, thereby increasing their risk of skin injury related to immobility.

Recognizing the situation's urgency, the hospital took a proactive step by forming a HAPI committee, a collaborative effort involving various stakeholders. This committee conducted a thorough gap analysis, identifying one main contributing factor: the bed surface was insufficient for patients at high risk of skin injury. To address this, a comprehensive plan was developed to

implement a static mattress overlay for all patients with a Braden score of less than nineteen. The regional benchmark for HAPI per 1000 patient days is 0.82 and the local SPI target is 2.03.

Currently, this unit is 0.58 per 1000 patient days.

Specific Project Aim

The specific aim of this project is for a medical-surgical telemetry unit to reduce HAPI by 50% from a baseline of 0.58 per month to a target of 0.29 per month by July 2024.

Available Knowledge

Before implementing the EHOB mattress overlay as a performance improvement project, the HAPI committee developed a PICOT question to guide their test of change for an action plan. The PICOT question was: In a trauma hospital on an adult medical-surgical telemetry unit, how does implementing a static overlay mattress for adult patients with a Braden score of less than nineteen, compared to the current practice, affect the prevention of HAPI within three months?

A literature review was conducted in CINAHL and PubMed, yielding 1,848 articles. These articles were further filtered for peer-reviewed, academic, and written after 2018, narrowing the articles to 141. Another filter with the keywords “*pressure ulcer*” and “*static overlay*” yielded 6 results in PubMed and 4 in CINAHL. Of these articles, the top 5 were selected for use in this project. The Johns Hopkins tool was used to evaluate the evidence (Dang et al., 2022), see Appendix A, evaluation table.

Beeckman et al. (2019) highlight that as the world’s population ages at a much higher percent than previously, in conjunction with increased numbers of patients suffering from chronic and acute diseases, the older population is at a high risk of developing skin conditions like pressure injuries. The study was a randomized controlled trial (RCT) in 26 nursing homes with 306 patients. 153 patients were included in each group and selected randomly through a

computer-generated list of random numbers. Staff nurses were educated on pressure ulcers and skin assessments 2 weeks before the start of the trial. The conclusion was that the static overlay mattress was more effective in preventing HAPI in high-risk populations. This article proved helpful in providing evidence-based practices for the prevention of HAPI. Based on the Johns Hopkins evaluation table, the evidence rating in this article is Level I A.

Edsberg et al. (2022) review how pressure injuries develop due to tissue loading above a patient's tissue tolerance. Multiple risk factors add to the risk of pressure injury, including mobility, activity tolerance/limitations, perfusion, circulation, skin status, moisture, nutritional status, and age. The study was an observational cohort study that evaluated the implementation of HAPI prevention strategies for 296,014 patients in 1,801 acute care facilities in the United States. The study evaluated interventions for pressure injury prevention using data from the 2018/2019 International Pressure Ulcer Prevalence (IPUP) study. The interventions used included repositioning, head-of-bed elevation, support surface, heel elevation, minimizing linen layers, moisture management, and nutritional support. Overall, this study found that the implementation rates of these strategies were substantial. This article helped determine the multicomponent needed for a HAPI prevention bundle. Based on the Johns Hopkins evaluation table, this study is a Level III A.

According to Horup et al. (2020), pressure injuries cause harm to patients and are a financial burden to the economy. This study was a quasi-experimental observational study reviewing two types of overlay mattresses. The study included 1,557 patients, 720 of whom were before the implementation of the overlay mattress and 873 during the test period utilizing the overlay mattress. They concluded that static overlay mattresses are an excellent alternative to alternating air mattresses; however, there was no statistical significance to prove this. This study

helped determine the effectiveness of the static overlay mattress. The Johns Hopkins evaluation table shows this study is a Level II A.

According to Lin et al. (2019), despite pressure injuries being preventable, they occur frequently in hospitals. HAPI is harmful to the patient, hurts the quality of life, increases the length of stay, is a financial burden, and increases morbidity and mortality. This study performed a systemic review to determine the effectiveness of HAPI prevention in the adult intensive care unit. It used 21 peer-reviewed articles, 12 of which were quality improvement projects, and 9 were research papers. The study found up to 11 commonly implemented interventions, suggesting that care bundles with multicomponent interventions were more effective than single-component interventions. This study helped develop a care bundle for HAPI prevention. This study is a Level V A based on the Johns Hopkins evaluation table.

Padula and Black (2018) suggest that HAPI can be prevented when implementing best practice guidelines. Best practices include moisture control, friction/shear control, skin assessments, risk assessments, nutritional optimization, utilization of support surfaces, and frequent repositioning every 2 hours. This article is not a study; however, it does review clinical practice guidelines. The article helped develop HAPI prevention guidelines based on best practices. The article is a Level IV A based on the Johns Hopkins evaluation table.

Serraes et al. (2018) suggest that support surfaces are critical to preventing HAPI. Support surfaces help distribute the load/weight of the patient by conforming to the body, which increases surface area. This study systematically reviewed the available evidence to determine the effectiveness of static overlay mattresses in preventing HAPI. After exclusion criteria were added, 13 articles were chosen for review. While no studies reported statistical significance in decreasing HAPI, they also stated that there was evidence to support that they are effective in

reducing HAPI. This study helped determine the effectiveness of the static overlay mattress. The Johns Hopkins evaluation table shows this study is a Level III A.

The evidence collected supports implementing a static overlay mattress in conjunction with other multicomponent interventions to reduce HAPI. Since this study's unit already utilizes multicomponent interventions for HAPI prevention, this study will focus on the effectiveness of adding the static overlay mattress.

Rationale

Since change is a common aspect of business practice, many models can be used to ensure that a change project is successful. The Stevens Star Model of Knowledge Transformation will be used for this project. This model helps explain the cycle, nature, and characteristics of knowledge used in EBP (Melnyk & Fineout-Overholt, 2019). This model consists of 5 stages of knowledge transformation that act as the 5 points on a star: 1) Discovery Research, 2) Evidence Summary, 3) Translation to Guidelines, 4) Practice integration, and 5) Process and Outcome Evaluation. The goal is to summarize the available evidence into a single statement and then translate it into a guideline, which is then integrated into practice. Finally, the results are evaluated to determine if the desired outcomes were met.

The Stevens Star Model of Knowledge Transformation will help guide this project. In the first phase, all available evidence was gathered, and the strength of the evidence was classified. The evidence was then summarized to include crucial clinical practice guidelines for HAPI prevention. In this case, the unit incorporates all current practice guidelines except for using special support surfaces. So, it was determined that the guideline that needed to be added was using a static overlay mattress. The team gathered the materials needed to implement this mattress by collaborating with other administrative leaders and the materials management team.

The new practice guideline was disseminated to all frontline staff to ensure smooth practice integration. This occurred with a tri-fold poster displaying all the available knowledge related to the static overlay mattress in conjunction with team huddles and one-on-one education using a roving cart. The practice guideline was rolled out after 2 weeks of thorough education for the frontline staff. The team will then monitor the available data regarding HAPI through weekly reviews of the interventions and regular chart and room audits to ensure compliance. The data will be evaluated throughout the 3 months of implementation and integration into practice. The data will then be evaluated to determine if it led to the desired aim of this project.

Context

A microsystem assessment and Gap Analysis, see Appendix B, were done for a 24-bed medical-surgical telemetry unit in a Northern California healthcare system hospital in Vacaville, CA. The purpose of this unit is to utilize all available resources to ensure EBPs are implemented in a way that will provide the best care to patients and their families to improve their health. The unit's average adult population is 66 years old and is, on average, filled to 91% capacity with a high to high+ acuity. 65% of the population is male and 35% is female. Common admitting diagnoses include congestive heart failure (CHF), trauma, stroke, gastrointestinal bleeding (GIB), alcohol withdrawal, altered mental status, chest pain, general surgeries, and uncontrolled pain. 86% of patients are admitted from the emergency department (ED), 12% are transferred from other units, and 2% are admitted from outside the hospital.

The members of this team have improved their culture by developing a strong sense of teamwork throughout all three shifts. The IHI culture assessment tool was utilized to assess the culture and revealed that there is work to improve communication. The areas that scored high were core values: compassion and respect. This team agrees that when they implemented the Star

of the Month program, where they recognized each other for their outstanding work, it helped them feel respected and appreciated by their team members, which led to greater unity throughout the unit. After discussing the many processes within the unit, it was mutually agreed that the processes are understood and followed with a few exceptions, but that the escalation process is utilized in those circumstances. When call lights and alarms were tracked, the unit found that the two most common requests were related to toileting and pain management.

A strength, weakness, opportunity, and threat (SWOT) analysis was performed, see Appendix C. The strengths identified were the presence of supportive administrators and leaders, staff willingness to use innovative technology to reduce HAPI, and staff willingness to decrease costs associated with HAPI. Weaknesses include the initial and reoccurring costs of the mattress overlay, staff training, increased medical waste, buy-in from staff, requires a policy for HAPI prevention, and potentially harmful to patients if not utilized correctly. Opportunities include increased use of technology to reduce patient harm and EBP, which can be disseminated to other healthcare organizations. Potential threats are expensive materials, increased waste, and no external financial support.

A power interest grid is an essential tool utilized during a change project to help manage the different stakeholders. The power grid is a matrix that categorizes the stakeholders based on their power and interests concerning the change project, See Appendix D. Individuals with high power but low interest may not want all the details and updates related to the change project. For this project, the high-power, low-interest individual is the CNE. The high-interest and high-power individuals needing frequent updates are the department manager and the adult services nursing director. Frontline staff are considered lower power but are of high interest and must be updated frequently throughout the project. This communication will typically occur through team

huddles and one-on-one nurse leader rounds. Another low-power but high-interest group is the wound care staff nurses. These nurses are a part of the HAPI committee and will receive updates via e-mail and bi-weekly committee meetings. Since the frontline staff have minimal power but great influence, they will need to be monitored closely to ensure no barriers or complications arise.

Intervention

For the intervention, after the literature review and root cause analysis were conducted to identify gaps in care, a process map was completed to identify the current HAPI prevention process, see Appendix E. The HAPI committee determined that adding the static overlay mattress to the HAPI bundle was the intervention that needed to be implemented. Our recommendations included educating all the staff on using the static overlay mattress with a roving cart. The roving cart contained a trifold poster board with all the necessary information to educate staff on the indications and contraindications for use and the proper mattress placement. While using the roving cart, the team had each staff member complete a teach-back using an example overlay mattress to ensure understanding and knowledge of the mattress. The assistant nurse manager (ANM) was also tasked with ensuring assignment sheets had coding in place to easily identify patients with a Braden score of eighteen or less on each shift e-assignment sheet. In addition, the team huddled a reminder to ensure proper use of the overlay mattress. The cost to implement this project for a full year was \$35,180. The cost of each mattress is \$89.39. The unit estimates we will use thirty mattresses a month, a total of \$2,682 a month and \$16,092 per year. The cost of a two-week education is \$3000 for the sales rep. The cost of 24 hours of education and training of staff by 6 team members is \$4,704. The project budget was determined to be \$23,796, See

Appendix F. Since the average cost of a HAPI for a hospital on the low end is \$70,000, the cost avoidance for this project was estimated to be \$240,116, See Appendix G.

Study of the Intervention

The outcome measure for this project is the number of HAPI in the medical-surgical telemetry unit after the implementation of the waffle mattress. The process measures for this project include the percentage of patients with a waffle mattress on all beds of patients with a Braden score of eighteen or less, the percentage of patients admitted to the unit with a documented two RN skin assessment within eight hours of admission, the percent of patients with a documented Braden score within eight hours of admission. The balancing measures include tracking the trend in incremental overtime, tracking device-related pressure injuries related to the mattress, and tracking patient care experiences related to the mattress, see Appendix H.

The IHI Model for Improvement (IHI, 2023), also known as a plan, study, do, act (PDSA) cycle, was applied to help guide the work in this project, see Appendix I. The three questions asked were:

- 1) What are we trying to accomplish?

The goal of this project was to reduce HAPI. The first phase included educating and training the staff on the static overlay mattress. Once training was complete, the intervention was implemented.

- 2) How will we know if the change is an improvement?

The quality nurse consultant and ANM reviewed documentation and report data. Based on the data collected, the team determined if any changes were needed to the intervention as part of the PDSA cycle.

3) What changes can we make to improve our state?

The PDSA cycle results were analyzed to determine whether the intervention was successful. If any improvements were noted, they would be made, and the new intervention would be implemented and tested.

The IHI Model for Improvement was utilized throughout this project and provided a way for the team to implement a test of change. It allowed the team to choose an intervention to implement, implement the intervention, test it, evaluate it, improve it if needed, and retest it (AHRQ, 2020).

Ethical Considerations

This project has been approved as a quality improvement project by faculty using quality improvement review guidelines and does not require IRB approval, See Appendix J. This project incorporates the American Nurses Association (ANA) code of ethics and the Jesuit Values. The ANA code of ethics describes nine provisions a nurse must keep. Within the code of ethics, provision 4 includes a nurse's responsibility to ensure optimal patient care (King et al., 2019). This project intends to ensure a HAPI prevention bundle that will protect patients at risk of skin injury from developing HAPI. Thus, its main goal is to reduce harm to patients. As such, this project incorporates the goals of the code of ethics. *Cura Personalis* is a Jesuit Value that means “care for the person,” which means that someone will care for any and every person equally and equitably (Our Mission and Values | University of San Francisco, n.d.). Every one of God’s creations is worthy of that care. Since this project is focused on caring for patients at risk of skin injury, it incorporates these Jesuit Values.

Outcome Measure Results

Implementation of the waffle overlay mattress led to a decrease in HAPI occurrences in the medical-surgical telemetry unit. The project started in March 2024 with the formation of the HAPI committee. The project ended in July 2024 with great success. However, it was not as successful as the team had hoped. The aim of the project was to decrease HAPI from a rate of 0.58 per month to a rate of 0.29 per month; however, with one stage 2 HAPI in April, the end result was a rate of 0.33 per month, See Appendix K. The one HAPI occurred on a patient who did not have the waffle overlay mattress in place. This was likely a result of the beginning stages of the project while the education was still early and ongoing. Due to the success of the project, leadership decided to spread the project to the other adult inpatient units excluding the ICU. While the results did not reach the desired goal within the 3-month timeframe of the project, based on the last 2 months of data, it is projected that by the end of the year, the project will surpass its goal. Balancing measures revealed that there was no increase in incremental overtime during the duration of this project. The unit's mobility remained above goal at 76.8% and bed rental usage actually went down by an average of 2 per month. Overall this project was successful.

Summary

The process measures implemented on the medical-surgical telemetry unit included a process for early recognition of at-risk patients and the implementation of a static overlay mattress for all at-risk patients. The assistant nurse manager audited these measures over three months from April 18, 2024 through July 18, 2024. The audits provided meaningful information about current gaps in practice. The early stages of the project evaluation revealed that only 50% of patients who were at high risk for skin injury had the waffle overlay mattress in place. After completion of education compliance went up to 93% of patients having the waffle overlay in

place. This proves that staff education and understanding of EBP is highly important to improving patient safety and quality of care. The audits also revealed a high compliance rate of both Braden skin assessments and 2 RN skin checks. This told us that our staff nurses are vigilant in ensuring patients are assessed and documented in a timely manner and that there were very minimal gaps in knowledge or understanding of the policies and procedures of admission assessments and documentation.

Balancing measures for a project allow for any unintended consequences, good or bad, to be monitored. By monitoring balancing measures, we learned that by improving the surface of our inpatient beds with the waffle overlay mattress, we decreased the need for rental beds by 2 per month, which helps decrease medical costs for our patients. We were concerned that the use of this mattress could impact our incremental overtime. However, the incremental overtime remained as its baseline throughout the project. Another balancing measure that was a concern was whether the unit's mobility score would go down. We did not want patients to be left in bed and immobilized because the mattress was in place. We were pleasantly surprised to see that the mobility on the unit was an average of 76.8% during the duration of the project, which is well above the regional goal of 70%.

One lesson learned from this project was the importance of staff buy-in and engagement. Without everyone's engagement, this project would not have been a success. The biweekly committee meetings included the quality consultant who was able to keep us updated on our quality results. It also allowed the team opportunities to ask questions. The team was then able to disseminate the information and keep the unit up to date with the ongoing results of the project. Staff were given opportunities in huddles to provide feedback. It was through this feedback that the staff felt it was important to get a thorough report prior to admissions or transfers so that the

room could be prepared with the waffle mattress already in place before the patient's arrival. The team felt that being proactive would save them the hassle of trying to place a mattress under a patient who could not mobilize or who did not have an overhead lift in their room. They also felt it would be less time-consuming to have the mattress already in place.

Conclusions

HAPIs are preventable patient harm events that are expensive for healthcare organizations and not reimbursable. HAPI prevention bundles and strategies must be in place to prevent these patient-harm events. This unit's current practice was insufficient, and change was necessary. The HAPI committee came together to review EBP, and after careful review, the decision was made to implement a static overlay mattress for all at-risk patients. The materials management team was contacted and approval to purchase and stock these mattresses on this unit was given. The specific aim of this project was to decrease HAPI by 50% on this unit. The Stevens Star Model of Knowledge Transformation was chosen as the guide for change in this project. Key findings revealed a 34% decrease in HAPI from a baseline of 0.58 per month to 0.33 per month. Staff education, early identification and escalation of at-risk patients, and early intervention increased staff awareness which contributed to the unit's improved patient outcomes. The unit now has a structured plan to ensure continued vigilance to reduce HAPI. As a result of the success of this project the intervention will be disseminated throughout the other adult inpatient units.

Implications for other units or hospitals that want to incorporate the use of the waffle overlay mattress include a focus on the education of staff on the indication and proper use of the mattress. They can expect staff pushback and will need to consider the availability of resources. It will also be important for them to ensure there is an opportunity for staff to share feedback so

that it is not a burden on them to use the mattress, and it will encourage staff engagement.

Collaboration with the quality department and wound care would be beneficial. This intervention was one that was simple to implement and very cost effective. For organizations who are looking for an improved surface for their patients without buying all new expensive mattresses, this is a great option that improves the quality of care for patients who are at risk of skin injury by decreasing patient harm events.

The unit has a HAPI prevention strategy, so sustainability will be important. Over the remainder of 2024, the assistant nurse manager will continue to monitor and audit the interventions closely. Leadership will also continue to provide education and reminders during shift huddles and give real-time feedback during in-room audits. As barriers are identified, the HAPI committee will meet monthly to discuss and troubleshoot them through continued PDSA cycles and small tests of change.

A successful HAPI prevention strategy has many implications. Improved quality of life is crucial for ensuring our patients can return to their prior level of function and continue doing what they require in their community. Decreased patient harm leads to sustained and consistent quality of care. Decreased lengths of stay lead to improved patient care experiences and decreased medical costs.

References

- AHRQ. (2020). Health literacy universal precautions toolkit, 2nd edition.
<https://www.ahrq.gov/health-literacy/improvme/precautions/tool2b.html>
- Beeckman, D., Serraes, B., Anrys, C., Van Tiggelen, H., Van Hecke, A., & Verhaeghe, S. (2019). A multicentre prospective randomized controlled clinical trial comparing the effectiveness and cost of a static air mattress and alternating air pressure mattress to prevent pressure ulcers in nursing home residents. *International Journal of Nursing Studies*, 97(97), 105–113. <https://doi.org/10.1016/j.ijnurstu.2019.05.015>
- Dang, D., Dearholt, S., Bisset, K., Ascenzi, J., & Whalen, M. (2022). *Johns Hopkins evidenced-based practice for nurses and healthcare professionals: Model and guidelines* (4th ed.). Sigma Theta Tau International.
- Edsberg, L. E., Cox, J., Koloms, K., & VanGilder-Freese, C. A. (2022). Implementation of pressure injury prevention strategies in acute care. *Journal of Wound, Ostomy & Continence Nursing*, 49(3), 211–219. <https://doi.org/10.1097/won.0000000000000878>
- Horup, M. B., Soegaard, K., Kjølhed, T., Fremmelevholm, A., & Kidholm, K. (2020). Static overlays for pressure ulcer prevention: a hospital-based health technology assessment. *British Journal of Nursing*, 29(12), S24–S28.
<https://doi.org/10.12968/bjon.2020.29.12.s24>
- IHI. (2023). How to improve. *Institute for Healthcare Improvement*.
<https://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>
- King, C.R., Gerard, S.O., & Rapp, C.G., (2019). Essential Knowledge for the CNL and APRN Nurse Leaders. *Springer Publishing Company*.

- Lin, F., Wu, Z., Song, B., Coyer, F., & Chaboyer, W. (2020). The effectiveness of multicomponent pressure injury prevention programs in adult intensive care patients: A systematic review. *International Journal of Nursing Studies*, 102, 103483. <https://doi.org/10.1016/j.ijnurstu.2019.103483>
- Melnyk, B. M., & Fineout-Overholt, E. (2019). *Evidence-based practice in nursing & healthcare: A guide to best practice* (4th ed.). Wolters Kluwer Health.
- Our Mission and Values/University of San Francisco. (n.d.). www.usfca.edu.
<https://www.usfca.edu/who-we-are/reinventing-education/our-mission-and-values>
- Padula, W. V., & Black, J. M. (2018). The Standardized Pressure Injury Prevention Protocol for improving nursing compliance with best practice guidelines. *Journal of Clinical Nursing*, 28(3-4), 367–371. <https://doi.org/10.1111/jocn.14691>
- Serraes, B., van Leen, M., Schols, J., Van Hecke, A., Verhaeghe, S., & Beeckman, D. (2018). Prevention of pressure ulcers with a static air support surface: A systematic review. *International Wound Journal*, 15(3), 333–343. <https://doi.org/10.1111/iwj.12870>

Appendices

Appendix A: Evaluation Table

PICOT Question: In a Trauma hospital on an adult medical-surgical telemetry unit, how does implementing a static overlay mattress for adult patients with a Braden score of less than nineteen, compared to the current practice, affect the prevention of hospital-acquired pressure injuries within three months?

Study	Design	Sample	Outcome/Feasibility	Evidence Rating
Beeckman, D., Serraes, B., Anrys, C., Van Tiggelen, H., Van Hecke, A., & Verhaeghe, S. (2019). A multicentre prospective randomized controlled clinical trial comparing the effectiveness and cost of a static air mattress and alternating air pressure mattress to prevent pressure ulcers in nursing home residents. <i>International Journal of Nursing Studies</i> , 97(97), 105–113. https://doi.org/10.1016/j.ijnurstu.2019.05.015	RCT	306 patients in 26 nursing homes and 94 different wards.	This study revealed that static air mattresses effectively prevented HAPI for high-risk populations. Helpful in determining the implementation of EBP.	L: I A
Edsberg, L. E., Cox, J., Koloms, K., & VanGilder-Freese, C. A. (2022). Implementation of pressure injury prevention strategies in acute care. <i>Journal of Wound, Ostomy & Continence Nursing</i> , 49(3), 211–219. https://doi.org/10.1097/won.0000000000000878	Observational, cohort study with cross-sectional data collection	296,014 patients in 1,801 acute care facilities in the U.S.	This study revealed high compliance rates for the use of HAPI prevention strategies. This is feasible to help develop HAPI prevention guidelines based on best practices.	L: III A

Study	Design	Sample	Outcome/Feasibility	Evidence Rating
<p>Horup, M. B., Soegaard, K., Kjølhed, T., Fremmelevholm, A., & Kidholm, K. (2020). Static overlays for pressure ulcer prevention: a hospital-based health technology assessment. <i>British Journal of Nursing</i>, 29(12), S24–S28. https://doi.org/10.12968/bjon.2020.29.12.s24</p>	Quasi-Experimental	1,557 patients. 720 before implementation and 873 during the test period.	<p>This study revealed that static overlays are a feasible alternative to alternating-air mattresses (AAM). It also revealed that patients were pleased with the option of having a static overlay mattress.</p> <p>Helpful in determining the effectiveness of new evidence-based practices.</p>	L: II A
<p>Lin, F., Wu, Z., Song, B., Coyer, F., & Chaboyer, W. (2020). The effectiveness of multicomponent pressure injury prevention programs in adult intensive care patients: A systematic review. <i>International Journal of Nursing Studies</i>, 102, 103483. https://doi.org/10.1016/j.ijnurstu.2019.103483</p>	Systematic Review	21 peer review articles. 12 quality improvement projects and 9 research papers.	<p>The systematic review revealed that multi-component programs were more effective than single-component programs and had lower rates of HAPI.</p> <p>This is feasible when determining the multicomponent for a care bundle.</p>	L: V A

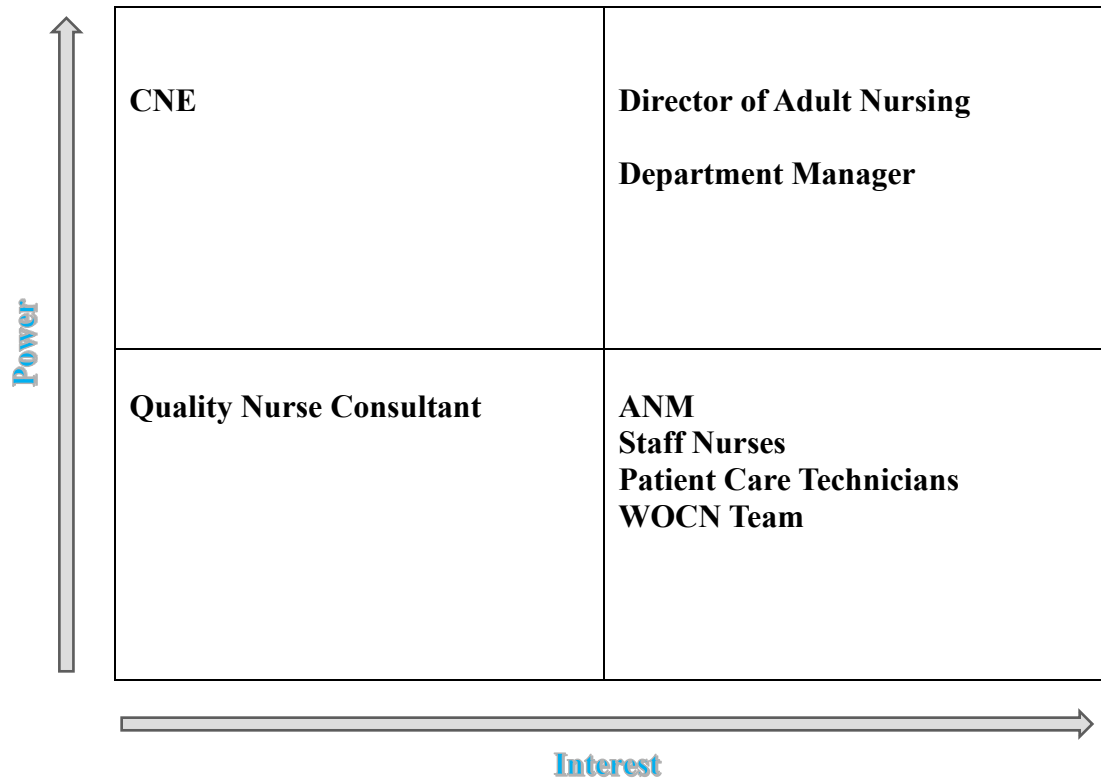
Study	Design	Sample	Outcome/Feasibility	Evidence Rating
<p>Padula, W. V., & Black, J. M. (2018). The Standardized Pressure Injury Prevention Protocol for improving nursing compliance with best practice guidelines. <i>Journal of Clinical Nursing</i>, 28(3-4), 367–371. https://doi.org/10.1111/jocn.14691</p>	Clinical Guidelines	None	<p>This article provides guidelines for developing a standardized HAPI prevention protocol based on the National Pressure Ulcer Advisory Panel (NPAUP) recommendations.</p> <p>This is feasible to help develop HAPI prevention guidelines based on best practices.</p>	L: IV A
<p>Serraes, B., van Leen, M., Schols, J., Van Hecke, A., Verhaeghe, S., & Beeckman, D. (2018). Prevention of pressure ulcers with a static air support surface: A systematic review. <i>International Wound Journal</i>, 15(3), 333–343. https://doi.org/10.1111/iwj.12870</p>	Systematic Review	13 studies.	<p>This study revealed that static overlay mattresses are more effective in HAPI prevention.</p> <p>Valid in the implementation of EBP</p>	L: III A

Appendix B Gap Analysis

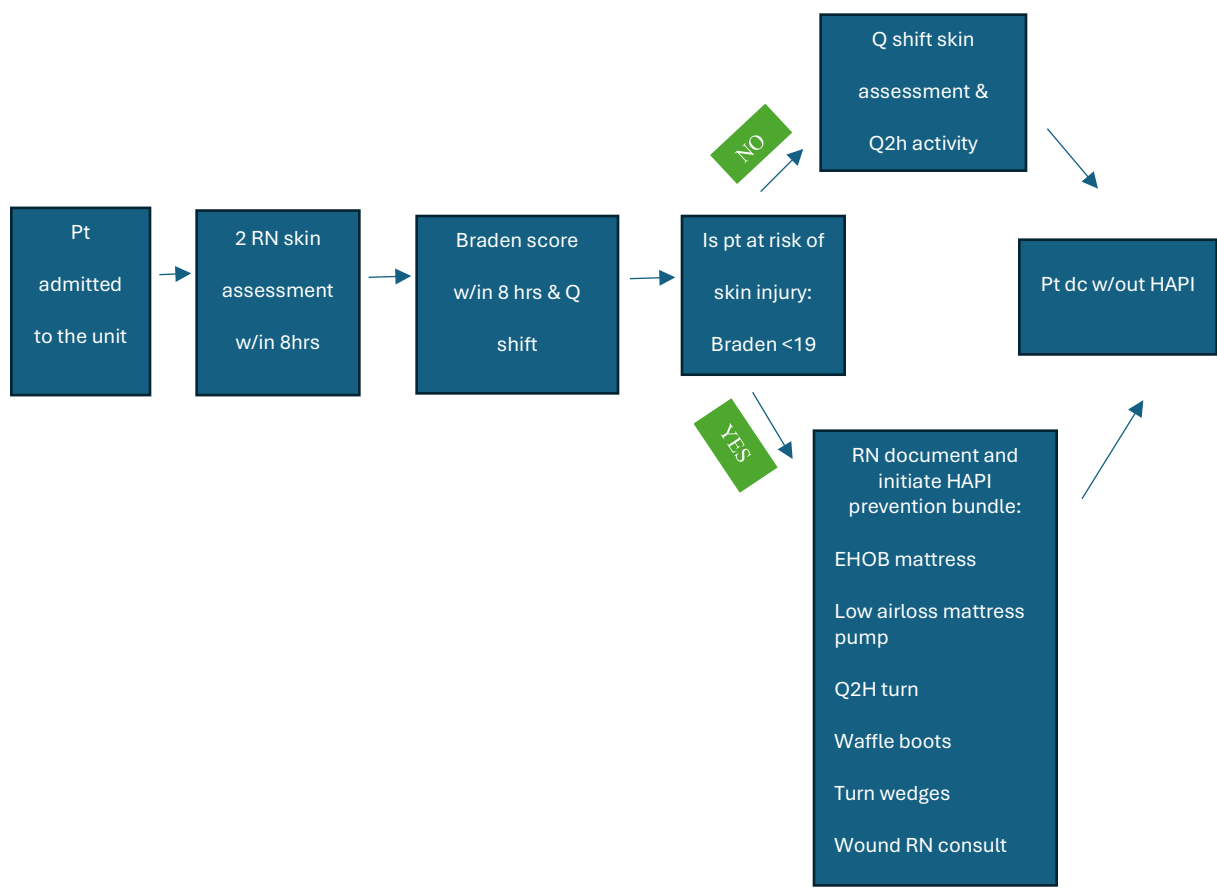
Gap Analysis		
<p>Area under consideration: Hospital Acquired Pressure Injury (HAPI) AIM: For a medical-surgical telemetry unit to reduce HAPI by 50% from a baseline of 0.58 per month to a target of 0.29 per month by June 2024.</p>		
Desired State	Current State	Action Steps
Reduce incidences of HAPI from 0.58 per month to a target of 0.29 per month.	4B has had 7 HAPI in 2023	To invest in a HAPI prevention program to reduce HAPI by utilizing technology to promote patient safety, such as the use of a waffle overlay mattress.
4B will reduce costs associated with HAPI.	4B has spent \$560,000 related to HAPI in 2023.	The manager of 4B will purchase an EHOB mattress overlay to supply the unit and train staff on its proper indication and use.

Appendix C SWOT Analysis

	Favorable/Helpful	Unfavorable/Harmful
Internal (attributes of the organization)	<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Support from hospital administrators • Use of innovative technology to reduce HAPI • Staff willingness to decrease cost • Staff RNs and PCTs dedicated to implementing new ideas to reduce HAPI and improve patient safety 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • Initial and recurring cost of the EHOB mattress • Requires training of all staff members • Materials are not environmentally friendly and contribute to waste • Requires buy-in from staff • Requires a policy and procedure for HAPI prevention • Potential for harm to patients if technology is not utilized correctly
External (attributes of the organization)	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Increased use of technology to reduce patient harm • Evidenced-based practices that can be disseminated to other Kaiser facilities 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Expensive materials • Increased waste, which is harmful to the environment • No external financial support to fund the HAPI prevention program

Appendix D Power Interest Grid

Appendix E Process Map



Appendix F Budget for the Project

Expenses	Cost
Mattresses- 6 months	\$16,092
Committee HRS- education/training	\$4,704
Supplier Representative	\$3000
Total estimated project cost	\$23,796

Appendix G Financial Cost Analysis

Financial Cost Analysis

Implementing use of a waffle overlay mattress on Medical-Surgical Telemetry unit to reduce costs of HAPI				
		# of HAPI	Cost/HAPI	Cost/HAPI/YR
<u>Unit's HAPI in 2023</u>		8	\$70,000	\$560,000
<u>Supplies Expense/Cost</u>	Number	Cost/Mattress	Cost/Month	Cost/Yr
Waffle Mattress (Average patients/month w/Braden<18)	30/month	\$89.39	\$2,682	\$32,180
<u>Education/Training Costs</u>		Cost/Hr/Day	Cost/Week	Cost/2 Weeks
Supplier Rep (\$50/hr)(6hrs/day)		\$300	\$1500	\$3000
		Staff	Cost/hr	24 hrs of training
Committee Hours- education/training		2 staff/shift	\$98	\$4,704
<u>Balance/Final Savings</u>		Reduced # HAPI	Reduced Cost/Yr	Annual Cost Avoidance
Improved state: 50% reduction to 4 HAPI/Yr		4	\$280,000	\$240,116

Appendix H Project Charter

Project Charter: Decreasing Hospital Acquired Pressure Injuries (HAPI) on a medical surgical telemetry unit.

Global Aim: To standardize the implementation of HAPI prevention bundles to decrease patient harm caused by HAPI.

Specific Aim: The medical surgical telemetry unit will reduce HAPI by 50% from a baseline of 0.58 per month to a target of 0.29 per month by May 2024.

Background:

Pressure injuries are a vital indicator of the quality of patient care; with the continued pressure placed on organizations to decrease harm and improve patient care, programs must be implemented to reduce hospital-acquired pressure injuries (HAPI) (Serraes et al., 2018).

According to Horup et al. (2020), HAPIs are painful for patients, expensive for healthcare organizations, and can have severe consequences associated with them. HAPI usually occurs over bony prominences or under medical devices caused by lying or sitting for prolonged periods. In 2022, 4B had zero HAPI events, compared to the 7 HAPI in 2023, which is a seven-hundred percent increase in HAPI over 1 year.

The United States spends nearly 12 billion dollars annually treating pressure ulcers. It is more cost-effective for healthcare facilities to implement HAPI prevention bundles to prevent pressure ulcers than paying for their treatment. According to Serraes et al. (2018), their systematic review revealed supporting evidence that implementing a static overlay mattress reduces incidences of HAPI. Static overlay mattresses are support surfaces that contour to a patient's body, which spreads the patient's weight, allowing for pressure redistribution. The air pockets within the static

mattress overlay allow for more air movement, which aids in decreasing moisture around the skin; excess moisture can lead to skin breakdown.

Goals

To provide a standardized process in assessment and documentation to identify early implementation of the static overlay mattress for patients with Braden scores of eighteen or less and/or who currently have a pressure injury that includes the following:

1. HAPI education for nurses and patient care technicians (PCTs)
2. Inservice on indications and use of the EHOB mattress for nurses and PCTs
3. Identification of and education for HAPI nurse champions
4. Standardized implementation of EHOB mattress overlay

Measures

Measure	Data Source	Target
Outcome		
% of HAPI reduction	SPI Index Chart Review	0.29 per month
Process		
% patients with Braden scores of 18 or less with EHOB mattress overlays in place.	Real-time room audits Chart Review-Health connect	90%
% patients with a Braden score documented within 8hrs of admission	Daily Braden report Chart review-Health connect	90%
% patients with documented 2RN skin check within 8hrs of admission	Daily skin assessment report Chart Review-Health connect	90%
Balancing		
No increase in incremental overtime	IOT report	IOT to remain at baseline
% patients mobilized daily at their max mobility	Daily Mobility Report	70%
% patients satisfied with the EHOB mattress overlay	Patient Survey	75%
Bed rental usage	Bed rental tracking binder	No change from baseline

Measurement Strategy

Background (Global Aim): To standardize the implementation of HAPI prevention bundles to decrease patient harm caused by HAPI.

Population Criteria: Medical Surgical Telemetry patients admitted to 4B.

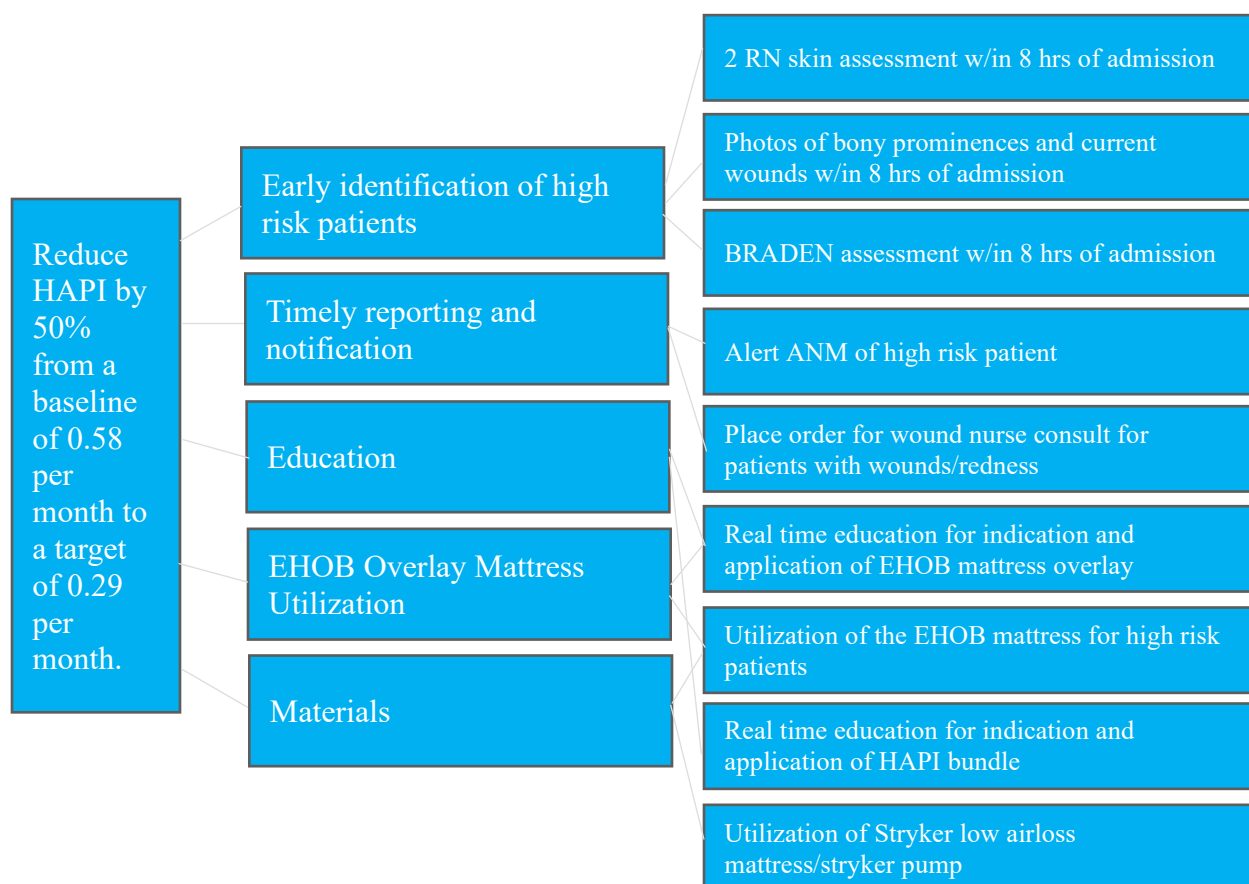
Data Collection Method: Data will be obtained from chart reviews, SPI reports, daily skin assessment reports, and daily room audits. A chart review from a sample of 30 patient records to establish a baseline will be conducted. After baseline data is collected, 15 patient records will be reviewed for weekly project measures for Q1 2024. The data plan will be reevaluated every month based on the results.

Data Definitions:

Data Element	Definition
Braden score	A numeric value used to assess a patient's risk for developing a pressure ulcer
PLOF	Numeric value used to assess a patient's prior level of function
CLOF	Numeric value used to assess a patient's current level of function
EHOB mattress overlay	Static overlay mattress, which is placed over the mattress and inflated

Measure Description:

Measure	Measure Definition	Data Collection source	Goal
Braden score is <19	N=# patients with Braden score less than 19 D=# patients admitted	Daily Braden report or chart audit	90%
% # patients with 2RN skin assessment documented within 8hrs of admission	N= # patients with 2RN skin assessment D=# patients admitted	Daily 2RN skin check report report or Chart review-	90%
% # patients with a EHOB mattress in place	N= # patients with documented mattress overlay D=# patients admitted	Room audit or Chart Review	75%

Driver Diagram

Sponsors

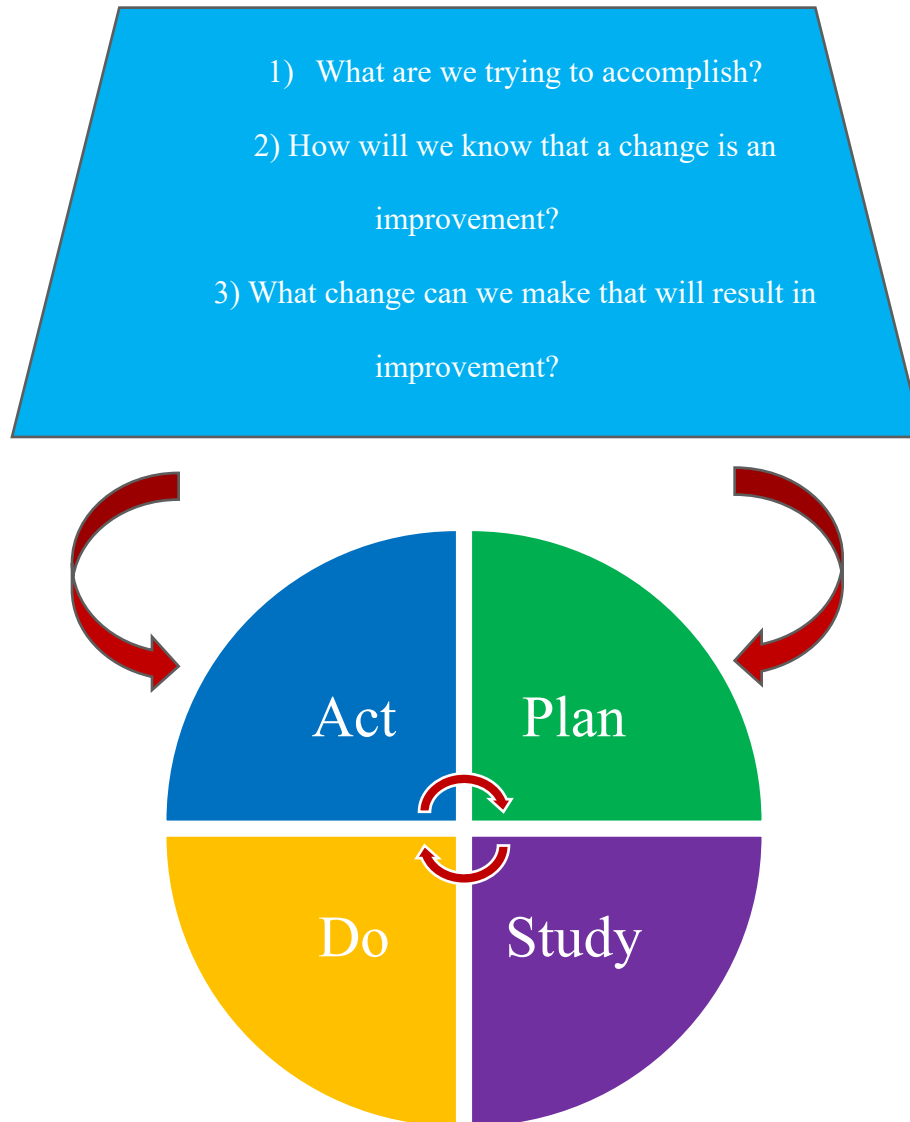
Chief Nursing Executive	C.S.
Director of Adult Services	I.N.
Quality Leader	M.P.
Department Manager	D.V.

Team

Wound RN Co lead	L.M.
RN Co Lead	C.S.
CNS/Educator	A.E.
Quality Nurse	M.P.
Staff nurse champions	A.S., A.Y., D.B.
ANM	E.J.

Appendix I PDSA

Model for Improvement



Appendix J IRB Non-research Determination Form



KPNC Research Determination Form

Version - 12.30.2021

Purpose: The Research Determination Office (RDO) is ancillary to the Institutional Review Board and is used to make determinations on projects that may not meet the definition of research involving human subjects for the Kaiser Permanente Northern California (KPNC) region. The RDO process results in one of three outcomes: 1) Research (stop and go to IRB), 2) Not Research (common for quality improvement and evidence-based practice projects), and 3) Not Human Subjects Research (research that does not involve human subjects – identifiable data or biospecimens).

Instructions: Complete the form with detailed responses and attach final supplemental materials (e.g. data collection forms such as chart review forms or surveys) and submit to: KPNC-RDO@kp.org. Final determinations may take up to four to six weeks including necessary revisions to the original request and final review.

1. **Project Title:** Reducing HAPI on a Medical Surgical Telemetry Unit

2. **Northern California Principal Investigator or Mentor (one PI/Mentor only) Name:** Jennifer Seifert
**Residents/Fellows/Students cannot be the project PI - an attending, clinical leader or experienced KP mentor must serve as PI*
 Principal Investigator/Mentor Title(s): Department Manager
 Principal Investigator/Mentor Email: Jennifer.C.Seifert@kp.org
 Principal Investigator/Mentor Home Facility: Kaiser Vacaville Medical Center

3. **KPNC Email of person submitting the form:** Emily.n.johansen@kp.org
Role of the lead person submitting the form: ANM

4. **Is this a patient case study or case series? (Note: At KPNC if the case series has 5 or more cases an IRB application is required. A case study or series is an activity to develop information that is ONLY intended to be shared for medical/educational purposes and not research).**
 Yes → Skip to Question 10 No

5. **Is this project being used to satisfy an academic degree requirement? These projects are only allowable for Kaiser Permanente managed/endorsed training or education or degree programs that have received executive approval.**
 No
 Yes → if Yes check one and include name of student: DNP; MSN program; PhD
 Other Specify degree program: **Name of Student: Emily Johansen** Name of School:
 University of San Francisco

- 5a. **Is the degree part of a KPNC clinical training program (e.g. KP Residency; KP psychology; KP Medical Fellowship; KP nursing etc)?**
 No Yes → If yes, which one: KP Nursing

- 5b. **Projects initiated by nurses that are: regional nursing projects, projects at more than one facility, and/or projects with external collaborations, review by the NCAL Nursing Research & EBP Program is required before submission to the RDO. For nursing degree projects contact the Research & Innovation Academy for guidance**
 Has a regional program representative reviewed this proposal?
 Yes → Name of the program facility/region leader: Rayne Soriano
 No → Do not proceed; contact the leader for review and approval

N/A

6. How did you determine this project evaluation was needed (check one response):

- I was charged with completing this evaluation → Name and Title of Leader who charged you with this evaluation:
- I am evaluating this project due to my formal KPNC role(s) and responsibilities
- I am evaluating this project due to my own interest
- I am completing the project for my educational requirement only
- I am evaluating this project due to my formal KPNC role(s) and responsibilities and for my academic requirement

7. Have you submitted a research application relevant to this project to the IRB for review?

- No Yes → If yes, has the IRB reviewed your application, and/or a determination been made?
- Yes → Attach the IRB approval or determination letter
- No

Concurrent submissions to both the Research Determination Committee and the IRB are not permitted. If you have already submitted to the IRB, you must await an IRB determination. If the IRB determines that your project does not require IRB review, you will be informed.

8. Is this project only being conducted in the KP Northern California region?

- Yes No → If no, what other Kaiser regions or institutes are included:

9. Is this project sharing any data with an outside institution or collaborator?

- No Yes → If yes, indicate where and why:
External collaborations and agreements require project intake via the Division of Research [Research Collaboration Portal](#).

10. Does the project involve the use of a U.S. Food and Drug Administration (FDA) regulated drug, device or biologic?

- Yes → go to question 10a.
- No → go to question 11.

10a. Will the results of the research be submitted to, or held for inspection by, the FDA?

- Yes No

11. Is there anything about the nature of this project which, if revealed to the public, could put KP at risk or competitive disadvantage?

- Yes → Please detail the risk/competitive disadvantage:
- No → go to question 12.

12. Purpose, specific aims and/or objectives of your proposed project (Example:

In 2017 KPNC implemented a roving dermatologist in primary care. The purpose of this quality improvement evaluation is to determine if patients preferred to see a roving dermatologist at the time of their primary care visit or to be scheduled for a later date dermatology appointment and also evaluate

*referrals to dermatology from PCPs before and after the change in workflow to understand how dermatology visits may have been impacted. **If Case Study/series:** If this is a case study or case series of less than five individuals state that your purpose is to describe a case study/series for submission to a journal or conference).*

The specific aim of this project is for a medical surgical telemetry unit to reduce HAPI by 50% from a baseline of 0.50 per month to a target of 0.29 per month by July 2024. We will assess whether the use of a static overlay mattress is helpful
We will compare number of hospital acquired pressure injuries (HAPI) 3 months prior to mattress use to 3 month period during mattress use.

- 13. Target population:** *(Describe the sample or samples you are studying; (e.g. **WHO:** adults hospitalized for pneumonia between **WHEN:** 1/1/2018 – 12/31/2019; **HOW MANY:** estimated sample size is 100,000; **WHERE:** Santa Clara and San Jose Medical Centers or KPNC. Note: you may be studying physicians, clinicians and nurses too, so each sample needs to be described. Project participants can be patients, providers, or any staff; they are not limited to patients only.*

***If Case Study/series:** State that this case study/series is summarizing the case of XX adult or child patient or patient seen for dx.*

This is a chart review study. The EMR of adults hospitalized with a Braden score of eighteen or less between. 1/1/2024 to 7/31/24 will be analyzed. Estimated sample size of 150 patient charts at Kaiser Vacaville Medical Center.

- 14. Procedures used to gather information:** **Indicate if these procedures would be or were conducted as part of standard of care, regardless of the proposed activity** (e.g. “The procedures and data being studied are standard of care as it is standard practice to evaluate a training program before and after its implementation.” Or, “the new workflow has been standard of care since 6/1/2019 and prior to that between 1/1/2019 – 5/31/2019 the workflow was also standard of care.” **If Case Study/series:** State all data were collected as part of standard of care.

The procedures and data being studied are a standard of care as it is standard practice to evaluate HAPI prevention.

- 15. Description of the data/samples gathered about individuals including names of datasets, URL, etc.:**

- a. **What data/samples will be collected, how and by whom the data will be analyzed.** (e.g. The following variables will be extracted and studied: age, gender, date of diagnosis; size of tumor; type of treatment; medications; disposition on discharge (e.g. home, SNF); The data will be analyzed by the project PI and a programmer in the SCL quality department. We will not employ inferential research methods such as hypothesis testing (e.g., t-test, Chi²) which

aim to produce generalizable research findings. If using SurveyMonkey we will anonymously survey the class attendants before and after the training (attach survey to the application). The data from the survey will be analyzed by the PI).

If Case Study/series: *List all usual case activities that will be summarized (e.g. H/P, labs, imaging (MRI, Echo, ultrasound etc.), pathology, discharge dx etc. will be summarized for this case study/series)*

The following variables will be extracted and studied: age, gender, race, Braden Score, PLOF-prior level of function test,, CLOF-current level of function. The data will be analyzed by the PI and a Quality Nurse Consultant. Medical Record Number will be removed prior to team working on project. Only PI will have names/MR# locked behind firewall in KP computer

b.

C o d e	M R #	A g e	G e n d e r	R a c e	B r a d e n S c o r e	P L O F	C L O F	Pr e s e n c e o r A b s e n c e o f H A P I
------------------	-------------	-------------	----------------------------	------------------	---	------------------	------------------	---

- c. ***How will/were the data/samples gathered from individuals? Indicate if you will participate in any interaction or intervention with the individuals. (e.g., The data were obtained as part of an IRB approved protocol or as part of routine clinical care/standard of care or as part of standard education training evaluation processes)***

If Case Study/series: *State all information was collected during usual care.*

All information was collected during usual care.

- c. ***Can the collected data/samples be directly or indirectly associated/linked with individual identifiers? (e.g. The data does not include any direct or indirect individual identifiers, or only by the project team so the data can be linked though the data will be de-identified when reported in aggregate summary format only).***

If Case Study/series: *State whether or not individual identifiers will be collected. Individual identifiers will be transformed to anonymous code and not seen by team. All data will be reported in aggregate,*

- d. ***Can others directly or indirectly associate/link the collected information with individual identifiers? (e.g. No, only the project team can directly associate or link the collected information. For the purpose of this project the data will be de-identified when reported in aggregate summary format only).***

If Case Study/series: *Respond with Yes or No.*

No

16. Generalizability of project findings, or value of project findings: *(e.g. These data are only intended to inform a specific medical center, or Kaiser Permanente, or these data will be presented at a conference in poster format; and the value of the data is sharing patient care workflow methods to potentially enhance patient care, or the value of the data is to share a successful change in an educational approach for residents regarding patient communication).*

If Case Study/series: *Typical responses state “to educate other clinicians regarding unique clinical presentations of dx X”*

To evaluate the benefit of using a new mattress at KP Vacaville.

Appendix K USF CNL Project: Statement of Non-Research Determination Form**CNL Project: Statement of Non-Research Determination Form**

Student Name: Emily Johansen

Title of Project: Reducing HAPI on a Medical Surgical Telemetry Unit

Brief Description of Project: To reduce HAPI with the implementation of a static overlay mattress

A) Aim Statement: The specific aim of this project is for a medical-surgical telemetry unit to reduce HAPI by 50% from a baseline of 0.50 per month to a target of 0.29 per month by June 2024.

B) Description of Intervention: All patients with a Braden score of 18 or less will have a static overlay mattress in place.

C) How will this intervention change practice?

This intervention adds another piece to our HAPI prevention bundle and will help reduce harm to our patients by protecting those at risk of skin injury.

D) Outcome measurements: HAPI reports, Braden reports, Mobility reports

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:

(<http://answers.hhs.gov/ohrp/categories/1569>)

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	ES	O
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	es	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive standard of care.	es	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	es	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	es	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	es	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	es	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	es	

The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	es	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>“This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</i>	es	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print): Emily Johansen

Signature of Student: Emily Johansen DATE 4/28/24

SUPERVISING FACULTY MEMBER NAME (Please print): Joycelyn McDonald

Signature of Supervising Faculty Member *Joycelyn McDonald* **DATE** *4/28/24*

Appendix L Outcome Data Display

Measure	Data source	Goal	Result
Outcome			
% of HAPI reduction	SPI index	0.29 per month	0.33 per month
Process			
%pts w/Braden<18 w/mattress	Room & chart audits	90%	93%
%pts w/Braden score on admit	Daily Braden report	90%	96%
%pts w/2RN skin check on admit	Daily skin assessment report	90%	98%
Balancing			
Incremental OT	IOT report	Baseline	Baseline
%pts Mobilized@CLOF	Daily Mobility Report	70%	76.8%
Bed rental usage	Bed rental tracking binder	Baseline	Down by 2 beds per month

Appendix M Materials for Implementation and Evaluation

Static Overlay Mattresses
Epic
Quality reports