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Successful Implementation of Hourly Rounding to Reduce Falls

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N660 Evidence-Based Improvement Project Prospectus

Successful Implementation of Hourly Rounding to Reduce Falls

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NURS-660-K12 Practicum: Quality Improvement and Outcomes Management

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Abstract

Background: Patient falls in healthcare settings have significant implications, contributing to extended hospital stays, increased medical costs, and adverse physical and psychological effects on patients. This study explores the impact of patient falls, the potential benefits of implementing hourly rounding, and the strategies to reduce falls and improve patient outcomes.

Problem: A northern Californian hospital's med surge/telemetry unit reported approximately 49 falls over the past two years. A quality improvement project was initiated to reduce falls and improve patient outcomes. The context section includes a microsystem assessment, purpose, and SWOT analysis, providing insights into the microsystem's strengths, weaknesses, opportunities, and threats.

Interventions: The intervention details the proactive and structured approach of hourly rounding. The project's success is based on reduced falls.

Outcome Measures: Our outcome measure was to reduce falls by 50% by July 31, 2024. The measure would reduce falls from four to two falls per month. Our process measure counted how many authentic hourly visits were completed. The team also tracked incremental overtime and nurse job satisfaction balancing measures.

Results: During the project implementation, there were seven falls, only three of which were unwitnessed. No injuries occurred during this time.

Conclusion: Total falls were not reduced during the project implementation, although unwitnessed falls were reduced by 50%. More research must be done to ensure the project's longevity.

Keywords: fall reduction, healthcare intervention, nurse leaders, quality improvement

Table of Contents

Introduction.....	Error! Bookmark not defined.
Leadership Statement.....	2
Problem Description	2
Specific Project Aim	3
Available Knowledge.....	3
Rationale	6
Context.....	7
Microsystem Assessment	7
Purpose.....	8
Patients	8
Professionals	8
Process	8
Patterns.....	9
SWOT Analysis	9
Power Interest Grid.....	10
Communication Plan.....	11
Intervention	11
Study of the Intervention	12
Ethical Consideration.....	13
Outcome Measure Results	14
Summary	14
Conclusion	15
References.....	16
Appendix A: Gap Analysis.....	19
Appendix B: Article Evaluation Table	20
Appendix C: Project Charter.....	22
Appendix D: SWOT Analysis.....	25
Appendix E: Power Interest Grid.....	26
Appendix F: Financial Analysis for Hourly Rounding.....	27
Appendix G: ROI and Cost Avoidance	28
Appendix H: PDSA Cycles for Surveying Staff on Hourly Rounding.....	29
Appendix I: Measurement Strategy	31

Appendix J: Outcome Data Display	32
Appendix K: Driver Diagram	33
Appendix L: Gantt Chart	34
Appendix M: IEB Non-Research Determination Form	35
Appendix N: Materials.....	38
Appendix O: Johns Hopkins Evaluation Tool.....	39

Successful Implementation of Hourly Rounding to Reduce Falls

Patient falls are a global issue that reportedly takes the lives of roughly 646,000 individuals each year (Warrington, Shortis & Whittaker, 2021). Patient falls are sentinel events that hospital staff can often prevent. Patients incur extended hospital stays and increased medical costs due to fall-related injuries, with an additional 6.3 days in length of stay (Baris, Intepeler & Yeginboy, 2018). Hospital patients are typically compromised, which puts them at greater risk for adverse effects from a fall (Freeman, 2022). Falls cause not only physical ailments but also psychological distress. It is common for patients to experience reluctance to participate in physical therapy after a fall. This may be due to fear of re-injury or anxiety about the recovery process (Watson, Salmoni & Zecevic, 2019). Watson et al. (2019) also found that encouraging patients to engage in physical therapy can improve their physical function and overall quality of life and reduce the risk of falls.

The cost of patient falls is staggering, with estimates reaching up to 50 billion dollars annually. Medicare does not reimburse these costs, making it crucial for healthcare providers to explore practical ways to prevent falls and improve patient outcomes (Oh-Park et al., 2021). According to Gliner et al. (2022), there are roughly 700,000 to 1,000,000 falls each year, highlighting the need for innovative solutions to address this global issue. By implementing proven strategies like hourly rounding, healthcare workers can reduce the risk of falls and positively impact patient care. Healthcare providers can work together to reduce these incidents and improve the quality of care for patients (Harden et al., 2021).

Effective hourly rounding addresses the five Ps: potty, pain, position, personal belongings, and pump. Nurses and patient care technicians can alternate shifts to facilitate hourly rounding, which decreases patients' anxiety and addresses their needs (Ram, John & John, 2019).

This paper discusses the factors contributing to patient falls and how authentic hourly rounding can help healthcare workers prevent fall-related injuries.

Leadership Statement

As an Assistant Nurse Manager, I pride myself on helping our team provide outstanding quality care. My goal as a leader is to improve patient outcomes by creating an atmosphere of positivity and harmony in the units I serve. Better patient outcomes start from the ground up, and having a place where staff members are encouraged to speak up allows everyone to come together to make needed changes. As a boy scout, I was always taught to leave a campsite better than I found it. I use that same mantra and apply it to our patients. My quality improvement project also does that; we can avoid preventable falls and other sentinel events by successfully implementing hourly rounding. It helps the patient leave the hospital without any additional concerns or wounds to heal from, financial or physical. This QI project aligns not only with my vision, which is to have patients feel safe by creating a peaceful atmosphere in the hospital, but also with the hospital's vision, which is to provide high-quality, affordable care to our community.

Problem Description

One of the common problems associated with falls on a med surge/telemetry floor is the risk of injury to patients, especially seniors and those with pre-existing medical conditions (Albasha et al., 2022; Freeman, 2022). Falls can cause serious injuries, such as fractures, head injuries, and internal bleeding. These injuries can lead to more extended hospital stays, increased healthcare costs, and reduced quality of life for patients (Baris et al., 2018). Falls can also have legal implications for hospitals if staff do not take proper precautions and preventive measures to ensure patient safety (Meei-Fang, 2022). Therefore, healthcare providers must implement fall

prevention programs and strategies to minimize the risk of falls. Upon reviewing the data provided by the Risk Management Department, it became apparent that an average of four falls per month within our microsystem indicated a significant gap in our quality standards (see Appendix A for gap analysis). Our goal is to have no patient falls. Although this number may seem unattainable, we knew we could dramatically reduce the falls we were experiencing.

Over the past two years, our hospital has experienced an increased patient fall rate. There have been approximately 110 falls, with 49 patients sustaining injuries. On the microsystem of the med/tele/oncology floor, there has been an average of four falls per month, contributing to roughly half of the total falls for the macrosystem. Our organization aims to reduce the number of falls with injury to less than 69.08 and 69.36 in the rolling year for the macrosystem. Our macrosystem currently has between 36 and 40 falls in the rolling year. The COVID-19 pandemic has increased the hospital population so much that single occupancy rooms are now double, leading to cluttered rooms and poor conditions for ambulation. Patient acuities have increased, and nurses need more time to provide care.

Specific Project Aim

On the med surge/telemetry floor, we aimed to reduce inpatient falls from four falls per month to two falls per month by July 31, 2024.

Available Knowledge

PICO: In (P) adult patients, how does (I) hourly rounding, compared to using (C) bed and chair alarms, (O) reduce patient falls? An online review was conducted using multiple databases: PubMed, CINAHL, COCHRANE of Literature Reviews, Walden Studies, and Google Scholar. The search focused on hourly rounding to prevent falls. The terms searched were *falls, hourly, rounding, purposeful, chair alarms, bed alarms, wearable technology, fall reduction, and fall*

prevention. The initial search resulted in 100 articles. Thirteen articles were removed due to the location of the study. Twenty articles were excluded due to missing PICO question components. The review was limited to articles from 2017-2023, leaving me with approximately 20 articles. Five articles were selected for this review and evaluation (see Appendix B). Articles were critiqued using the Johns Hopkins Evidence-Based Evaluation Tool (Dang et al., 2022).

Di Massimo et al. (2022) presented remarkable evidence that hourly rounding improves patient outcomes and decreases sentinel events. Their article presents the results of a cluster-randomized nation-based study comparing the effectiveness of two approaches to patient care in internal medicine wards. The two approaches examined were intentional rounding and standard of care. Intentional rounding involves nurses making regular rounds to check on patients and address their needs, while the standard of care involves nurses addressing patient needs as they arise. The study found that intentional rounding was associated with lower rates of falls, pressure ulcers, and call bell use but no significant difference in overall patient satisfaction or length of stay. However, they found that intentional rounding was associated with higher nursing workload and lower job satisfaction. Nurses felt like their jobs had become routine and took away their autonomy. The authors noted some limitations due to the difference in baseline characteristics between their sample groups. There was also a concern with measuring pressure injuries and falls, as their findings showed a greater prevalence of pressure injuries than falls. This study was rated as level 1 B.

Gliner et al. (2022) discussed the importance of nurses' effective communication and hourly rounding in reducing patient falls and improving patients' experience in acute care settings. Their study found that regular hourly rounding by nurses was associated with a significant decrease in patient falls and improved communication between nurses and patients.

The article emphasizes the need for healthcare organizations to prioritize communication and hourly rounding practices to improve patient safety and satisfaction. The data was collected from 31 military facilities from 2017-2019. There was a 21% reduction in falls during this period.

This study was rated as level III B.

Sun et al. (2020) investigated the impact of bedside shift reports and hourly rounding on hospital patient falls. The team emphasized the cost of patient falls, totaling roughly 50 billion yearly. The authors found that implementing these practices can positively impact reducing the number of falls experienced by patients. The article discussed the importance of communication and collaboration between healthcare providers and suggested that these practices can improve patient safety and outcomes. This study was rated as a level III B.

Ryan et al. (2019) provided a comprehensive review of the research on intentional rounding, a nursing practice that involves systematically checking on patients at regular intervals. Their review examines the benefits and challenges of intentional rounding and the factors that contribute to its success or failure. The authors conclude that intentional rounding can positively impact patient outcomes. However, its effectiveness depends on various contextual factors, such as the training and support provided to nursing staff, the healthcare facility's organizational culture, and patients' attitudes and preferences. The review highlights the need for further research and ongoing evaluation of intentional rounding as a nursing practice. This study was rated as a level V B.

Morgan et al.'s (2017) staff-led quality improvement intervention involved intentional rounding (IR) to prevent patient falls in a healthcare setting. Nurses conducted regular checks on patients at specified intervals using a standardized protocol. The study found that IR was associated with significantly reducing patient falls and increased staff satisfaction. However, the

authors noted that further research is needed to determine the long-term effectiveness and sustainability of the intervention. This study was rated as level V B.

The five primary articles and other literature reviewed indicate that hourly rounding can significantly reduce the incidence of patient falls. According to a study by Ram et al. (2019), hourly rounding reduced the fall rate by 40%, with no increase in call light usage or nurse workload. Hourly rounding also improves patient satisfaction and perception of care. Spano-Szekely et al.'s (2019) study found that hourly rounding led to a 50% reduction in patient falls. By addressing patients' needs proactively, healthcare providers can prevent falls and improve the overall quality of care.

Rationale

Implementing hourly rounding in a healthcare setting can be complex, but using Kotter's eight steps can help guide the project and make it more successful. The eight-step process for leading change was developed by Harvard Business School Professor John Kotter (2012). The eight steps are as follows: (1) establish a sense of urgency, (2) form a powerful coalition, (3) create a vision for change, (4) communicate the vision, (5) empower others to act on the vision, (6) create short-term wins, (7) consolidate gains and produce more change, and (8) anchor new approaches in the organization's culture. These steps help leaders guide their organizations through the change process effectively and successfully (Bedard, 2023).

Kotter's eight steps were applied to this quality improvement project. I established a sense of urgency by highlighting the importance of hourly rounding and its potential benefits for patients, staff, and the organization. Any new idea may seem like more work for the nurses, so it is essential to show them the benefit of hourly rounding and how it will lead to better patient outcomes and fewer call lights. Forming a powerful coalition is about bringing together a group

of key stakeholders who can provide support and resources for the hourly rounding project. For this QI project to succeed, senior leaders' support is crucial. I created a vision for change by developing a clear and compelling vision for hourly rounding, outlining what it is and how it will benefit patients and staff (see Appendix C, Project Charter). This vision is the group's outlook and not just the project managers. After the outcome and vision were established, it was critical to share the vision with all stakeholders, including staff and patients, to build support and enthusiasm for the project. Providing staff with the necessary training, resources, and support to implement hourly rounding effectively helps empower them to carry out the vision. We celebrated successes and milestones to build momentum and encourage staff to continue their efforts; as there will be bumps and roadblocks along the way, it is essential to celebrate when successes are made. As the project continues and data is collected, we will build on the success of hourly rounding by expanding it to other areas of the organization. Our vision is to implement this practice in all the adult patient areas. We aim to make hourly rounding an integral part of the health organization's practice by embedding it in policies, procedures, and staff training. By following these steps, our organization can implement hourly rounding and improve patient outcomes, staff satisfaction, and overall healthcare performance.

Context

Microsystem Assessment

A microsystem, simply put, is where patients receive care (King, Gerard & Rapp, 2019). Dartmouth Medical School created an assessment tool to help improve errors and assess microsystems. This tool helps identify purpose, patients, professionals, processes, and patterns (King et al., 2019). I focused on fall reduction and elimination within the microsystem.

As clinical nurse leaders seek to improve patient outcomes and decrease errors, finding tools that help facilitate the improvement is crucial. The five Ps microsystem identifies all the needed components to improve outcomes and reduce errors. The microsystem assessment tool includes all required staff for better patient outcomes and error reduction. With this tool, our team can pinpoint areas of improvement and reduce these harmful events.

Purpose

The purpose of this telemetry unit is to provide high-quality healthcare to community members. There has been a notable increase in telemetry/oncology floor patient falls, even among patients about to be discharged. My aim is to reduce these falls and establish preventive measures.

Patients

This microsystem serves patients suffering from respiratory, cardiac, cancer, and other metabolic conditions. Although we serve patients starting at age 18 on this microsystem, we generally see older adults.

Professionals

Our team comprises nurses, physical therapists, patient care technicians, and other hospital staff. Managers and assistant nurse managers oversee the floor's day-to-day operations to ensure high-quality care. Environmental services and dietary aids minimize patient falls by keeping rooms clean and decluttered and placing patient meal trays within reach.

Process

Our process for preventing falls has many different components. Effective hourly rounding addresses the five Ps: potty, pain, position, personal belongings, and pump. Nurses and

patient care techs alternate rounding times to facilitate hourly rounding. In addition to hourly rounding, chair and bed alarms are placed in high-risk patients' rooms.

Patterns

Patient care technicians and nurses generally assess the patients' mobility upon admission and throughout the patient's stay (Pavon et al., 2021). Ambulation is audited on all patients. Fall risk bands are placed on all patients who have difficulty ambulating or are deemed unsafe by physical therapists. This process needs to be improved for patients preparing for discharge. These patients are given more freedom and less observation at times. These patients are still compromised and should be supervised to ambulate to the bathroom. We have found patients who fell in the bathroom or room, and the root cause indicated that the patient did not know they still needed to ask for assistance.

SWOT Analysis

After conducting a SWOT analysis, we identified various aspects we must address to successfully implement hourly rounding in our microsystem (see Appendix D). Our microsystem has many *strengths*. The hourly rounding project needs a strong team engaged in better patient outcomes. Our microsystem has a team actively striving to improve patient experience and hospital outcomes. The hospital also has senior leader support for this project and approves resources and time to work on this intervention. Regular hourly rounding can facilitate the timely identification of patients' needs, including fall risk assessments and interventions. This will be a huge benefit and strength to the microsystem, as this approach fosters efficient communication between patients and healthcare providers, which can help to establish trust and enhance patient satisfaction.

One of the main *weaknesses* is that implementing hourly rounding may divert healthcare providers from critical patient care tasks and lead to overwork and understaffing. There is also a risk of hourly rounding becoming a checklist exercise, lacking meaningful patient interaction. Inadequate staffing levels challenge consistent and effective implementation, as staff absences can increase stress and workload for other team members.

Customization of the hourly rounding process can allow us to tailor the approach to the unique needs of diverse patient populations, including those with mobility issues or those in high-risk units. Our flexible staff can adapt to change, providing an *opportunity* to customize and improve the hourly rounding process. *Threats*: Inadequate staffing levels and staff calling in sick can disrupt the consistent and effective implementation of hourly rounding. There is a concern that inaccurate rounding reporting may skew the data, potentially impacting the credibility of the results. By addressing these weaknesses while leveraging the opportunities, we can work towards successfully implementing hourly rounding in our microsystem.

Power Interest Grid

A power interest grid was created to visually represent the individuals and groups involved in the fall reduction quality improvement project based on their level of power and interest (see Appendix E). Understanding the power and interest of each group can help project leaders tailor their communication and engagement strategies to ensure that everyone is informed and involved in the project. The high-power/high-interest group comprises the Nurse Manager/Medical Director, Quality Improvement Coordinator, and Patient Advocate. This group has significant power and is very interested in the project's success. The high power/low interest group comprises the Information Technology Specialist and Risk Management Director. This group has significant power, but their level of interest in the project is lower than the high

power/high interest group. The low-power/high-interest group consists of the nursing staff, patients, and their families. These individuals have a high level of interest in the project but relatively low power to influence its success. The low-power/low-interest group consists of the housekeeping and maintenance staff. These individuals have little power and little interest in the project.

Communication Plan

For a successful intervention, it is essential to have a good communication plan. The first thing we did was identify our key stakeholders, namely those affected by the project, including the patients, staff, senior leaders, and other healthcare team members. We also discussed the best way to reach them. We utilized Microsoft Teams, morning huddles, and our email system to convey needs, concerns, and wins during the implementation phase. Our communications to the team were clear and concise so as not to fatigue them with meaningless emails and messages. We also created a timeline for the project's completion and communicated the expectations to the team. As the project continues and we evaluate the effectiveness of the interventions, we will disseminate information to the team and request feedback. This will help the whole team stay accountable for the project and its success.

Intervention

Hourly rounding in healthcare is a proactive, systematic, and structured approach to patient care where healthcare providers regularly check on patients at scheduled intervals, typically every hour (Albasha et al., 2022). Hourly rounding aims to anticipate and address patients' needs, enhance patients' safety, and improve the overall healthcare experience. During hourly rounding, healthcare providers assess the patient's comfort, pain levels, toileting needs, and other essential requirements, providing opportunities for meaningful patient interaction. This

patient-care approach helps prevent anxiety distress, reduces the likelihood of falls, and ensures patients receive timely assistance. Our nurses and patient care technicians will alternate rounding on patients each hour to address the five Ps stated.

Return on Investment

This fall prevention project's return on investment (ROI) can be substantial. The project has minimal costs to implement, approximately \$2,500.00 for training, materials, and rollout (see Appendix F). If each fall costs an average of \$34,000 in expenses related to additional treatment, longer hospital stays, and potential legal fees, preventing ten falls would result in a total cost savings of \$340,000. Using the formula for return on investment: $ROI = (\text{Cost Avoidance} / \text{Cost of Investment}) \times 100$, we calculate the ROI for this fall prevention project as follows:

$$\text{Cost Avoidance} = \text{Cost Savings} - \text{Cost of Investment} = \$340,000 - \$2,500 = \$337,500.$$

$ROI = (\$337,500 / \$2,500) \times 100$ $ROI = 13,500\%$. This indicates that for every \$1 invested in the fall prevention project, there is a return of \$135 in cost savings. This demonstrates the significant financial benefit and ROI of implementing this fall prevention program, even with minimal initial costs (see Appendix G).

Study of the Intervention

The team measured the success of the hourly rounding project based on multiple data sources. We examine call light usage, real-time feedback, and data obtained from risk management. This allowed us to measure fall reduction as well as patient care experience. We also surveyed staff at the end of the intervention stage to obtain feedback from frontline healthcare team members. The project is considered a success if we can reduce falls by 50%, equating to two falls per month.

As a team, we knew that we could not go straight to hourly rounding if we were hoping to succeed with a long-lasting initiative. We first surveyed the staff on what hourly rounding meant to them. We wanted baseline data on how much education needed to be completed. After the survey was completed, we observed a serious gap between what was taking place and what was perceived as hourly rounding. Most staff were addressing needs as they arose. This “as-needed” care could be beneficial for some, but overall, it did not address the proactive nature of the project.

The second test of change was auditing or visualizing the bedside report/NKE and corresponding visits to each patient. We observed the nurses entering the room and noted whether or not they addressed the five Ps of authentic rounding. Approximately 92% of the nurses were observed completing patient rounds. These results were skewed as the nurses knew we were there and could not have blind surveillance. We questioned the authenticity of these examples and whether they would be duplicated when management was not present. The third PDSA was hourly rounding implementation. (see Appendix H, PDSA cycles for surveying staff).

Ethical Consideration

Implementing a fall reduction program aligns with Jesuit values and the American Nurses Association’s (ANA) ethical standards. Jesuit values emphasize caring for the whole person, promoting social justice, and serving others (University of San Francisco, 2024). By reducing patient fall incidents, healthcare providers can provide high-quality, safe care that addresses patients’ physical, emotional, and psychological needs. This aligns with the Jesuit value of *cura personalis*, or care for the whole person.

The ANA’s ethical standards also emphasize the importance of providing patient-centered care that prioritizes patient safety and well-being. By implementing a fall reduction program,

healthcare providers can ensure that they are promoting patient safety and reducing the risk of injury or harm. This aligns with the ANA's ethical standards of providing patients with safe, competent, and ethical care. Thus, this quality improvement project to reduce falls reflects our healthcare organization's commitment to providing high-quality, ethical care that aligns with Jesuit values and ANA ethical standards. This project has been approved as a quality improvement project by faculty using QI review guidelines and does not require IRB approval. See the Appendix for the Statement of Determination.

Outcome Measure Results

Seven total falls occurred during the project. The microsystem experienced four witnessed falls and three unwitnessed falls. The expected results were an overall reduction of falls by 50% or going from four falls per month to two falls per month, which was not achieved (see Appendix J, outcome data display, and Appendix K, driver diagram). The team expected to have a reduction in injury-related falls, which was achieved. Since hourly rounding has been proven to reduce falls, we anticipated more of a reduction in overall falls. We also did not see a decrease in call light usage for the same period. Staff reported that they felt the project caused their work to be more task-driven and micro-managed.

Summary

Overall, falls were relatively high during the two months of this project. However, unwitnessed falls decreased by 50%. Considering the gap and the hospital goals for falls, we are on track to reach target conditions. Our macrosystem tracks patients' falls that result in injury, and during the intervention period, no injuries were recorded. Although we did not achieve the goal of overall fall reduction, we are celebrating the decrease in injuries, which can be attributed

to increased visitations to each patient. Still need to add in lessons learned during the project, as well as what might have contributed to not achieving the goal.

Conclusion

There are many facets to authentic hourly rounding that need to be examined (see Appendix L). By proactively identifying patient needs, such as fall risk assessments and timely interventions, healthcare providers can ensure patients receive the best possible care. Regular hourly rounding promotes open communication between patients and healthcare providers, building trust and improving patient satisfaction. In addition, it can help identify patient falls early enough to allow for prompt intervention and prevent further injury.

Incorporating regular hourly rounding into patient care is a simple yet effective way to enhance patients' safety and quality of care. This project aims to spread throughout all adult services, but more research into the project's longevity needs to be completed. This work is vital for patient safety and well-being. It is patient-centered and will reduce falls and improve their overall experience in the hospital. One of the main takeaways we learned during this project was to start small and build upon it. We tried to roll out hourly rounding to a whole floor with multiple units; however, this strategy did not allow for much oversight and management. As we continue, we will scale back and build up to one side of the floor, and once that has been successful, we will incorporate the other unit. We will still facilitate small tests of change until we can successfully implement hourly rounding to decrease falls and improve our patient's healthcare experience.

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Appendix A: Gap Analysis

Gap Analysis		
Area under consideration: Hourly rounding to reduce falls and increase patient care outcomes and patient care experience.		
Desired State	Current State	Action Steps
50% reduction: two falls per month by July 31, 2024.	Over 20-plus falls in the rolling year. Average of 3-4 falls per month.	Bed alarms, Chair alarms, Call light system

Appendix B: Article Evaluation Table

Study	Design	Sample	Outcome/Feasibility	Evidence Rating
<p>Di Massimo et al. (2022). Intentional Rounding versus Standard of Care for Patients Hospitalised in Internal Medicine Wards: Results from a Cluster-Randomised Nation-Based Study. <i>Journal of Clinical Medicine</i>, 11(14), 3976.</p>	<p>Cluster-Randomised Nation-Based Study</p>	<p>1,822 patients at 26 sites</p>	<p>Hourly rounding showed a decrease in patient falls. There was a concern with categorizing pressure injuries into the same data findings as they were more prevalent.</p> <p>Feasibility: This project is feasible as no added staff were needed.</p>	<p>Level 1 B</p>
<p>Gliner et al. (2022). Patient Falls, Nurse Communication, and Nurse Hourly Rounding in Acute Care: Linking Patient Experience and Outcomes. <i>Journal of Public Health Management & Practice</i>, 28(2), E467–E470.</p>	<p>Non-Experimental Study</p>	<p>Data was collected from 31 military facilities from 2017 to 2019.</p>	<p>Hourly rounding was associated with a 21% fall rate reduction. Poorly rated nurse communication was associated with an 8.6-fold increase in patient fall rates relative to highly rated nurse communication.</p> <p>Feasibility: These implementations in our hospital would have lasting benefits to our patients.</p>	<p>Level III B</p>
<p>Morgan et al. (2017). Intentional Rounding: A staff-led quality improvement intervention in the prevention of patient falls. <i>Journal of Clinical Nursing</i>, 26(1–2), 115–124.</p>	<p>Quality Improvement Project</p>	<p>75-bed neuroscience unit; Pre-intervention patient total 46,654; post-intervention patient total 50,779.</p>	<p>Intentional rounding resulted in falls decreasing by 50%.</p> <p>Feasibility: This intervention is feasible because no additional staff were needed to complete the interventions.</p>	<p>Level V B</p>
<p>Ryan, L., Jackson, D., Woods, C., & Usher, K. (2019). Intentional rounding: An integrative literature review. <i>Journal of Advanced Nursing</i>, 75(6), 1151–1161.</p>	<p>Literature Review</p>	<p>2,498 articles retrieved from a database. After duplicates and additional screening, they found 18 studies that matched the criteria for the study.</p>	<p>Falls were reduced in 7 studies; patient care experience improved in 5 studies. Although this study measured additional data, we will only focus on falls and patient satisfaction.</p>	<p>Level V B</p>

<p>Sun, C., Fu, C. J., O'Brien, J., Cato, K. D., Stoerger, L., & Levin, A. (2020). Exploring Practices of Bedside Shift Report and Hourly Rounding. Is There an Impact on Patient Falls? <i>Journal of Nursing Administration</i>, 50(6), 355–362.</p>	<p>Experimental</p>	<p>9,693 observations of hourly rounding and bedside report.</p>	<p>Study showed a decrease in falls during the study collection period. Falls were associated with shift and day of the week but not BSR, HR, or the frequency of encounters with the patient.</p> <p>Feasibility: This intervention is feasible as hourly rounding and bedside reports are already practices in place. The key takeaway is the correct questions being asked during rounding.</p>	<p>Level III B</p>
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Appendix C: Project Charter

Project Charter: Successful Implementation of Authentic Hourly Rounding to Impact Falls

Global Aim: Nurses and patient care technicians should collaborate to check in with patients every hour, thus reducing sentinel events and improving the patient care experience and outcomes.

Specific Aim: By July 31, 2024, we aim to reduce inpatient falls from 4 to 2 per month.

Background:

From January 1, 2023, to December 31, 2023, our hospital system has experienced an increased patient fall rate. There have been approximately 110 falls, with 49 sustaining injuries. Our goal with this QI project is to reduce patient falls by 50% in the first six months. The COVID-19 pandemic has increased the hospital population so much that single occupancy rooms are now double, leading to cluttered rooms and poor conditions for ambulation. Patient acuities have increased, and nurses need more time to provide care. Patient falls are severe sentinel events that hospital staff can often prevent. Patients incur more extended hospital stays of approximately 6.3 additional days after a fall and increased medical costs when they fall (Baris et al., 2018).

Effective hourly rounding addresses the five Ps: potty, pain, position, personal belongings, and pump. Nurses and patient care techs alternate rounding times to facilitate hourly rounding. This rounding style decreases patients' anxiety and addresses their needs (Ram et al., 2019). Our hospital mission is to provide high-quality, affordable care to our communities. We can do this by more frequent rounding. Falls impact many aspects of a patient's stay. Reduction in falls will benefit the patient and the hospital. Measures to reduce patient falls do not need to be costly or expensive (Freeman, 2022). Each fall with injury costs the hospital approximately \$15,000.00 or higher. These falls lead to increased stays. Our hospital has an average of 55 falls annually, and 25 patients are injured. Factoring in the length of stay, radiology needs, and other miscellaneous costs, the total is approximately \$1,263,994.00 a year. Implementation costs are minimal at an estimated \$1,500.00. This price is based on training, handouts, and miscellaneous rollout costs. If the program reduced 50% of the falls in the first year, that would result in a \$718,997.10 cost avoidance and savings of approximately \$1,294,995.00 for the second year if falls were reduced by 90%. The second year would yield higher cost savings as the project would have already been implemented, and rollout costs would not be needed.

Implementing this project will have lasting patient benefits, such as increased patient care outcomes and experience and reduced falls. The implementation will also not negatively impact

hospital budgets as implantation costs are minimal, and no added costs are associated with its continuation. As healthcare workers strive to work together, they can reduce patient falls and improve patient outcomes.

Sponsors

Associate Chief Nursing Officer	GTA
1st Floor Manager	ET
Area Care Experience Lead	EM
Director of Adult Care Services	AM

Goals

To implement authentic hourly rounding where nurses and PCTs alternate each hour.

- 1) To reduce falls by addressing needs in a timely.
- 2) To minimize falls by frequent check-ins.
- 3) To increase the care experience of our members by addressing what matters most.
- 4) To decrease our patients’ anxiety by consistently addressing the five Ps of authentic hourly rounding.

Measures

Measure	Data Source	Target
Outcome: # of patient falls in a given time period	Risk Management tracking and ERRFs. Patient experience improvement from real-time survey data, HCAHPS score improvement, and happier patients.	50% reduction by July 31, 2024.
Process: Percentage of hourly round visits completed.	AHV tracking tool.	100%
# of CLOF assessments completed upon admission.	Health Connect Charting Tool	100%

Balancing: Incremental overtime	Payroll, Timekeeping	0%
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Team

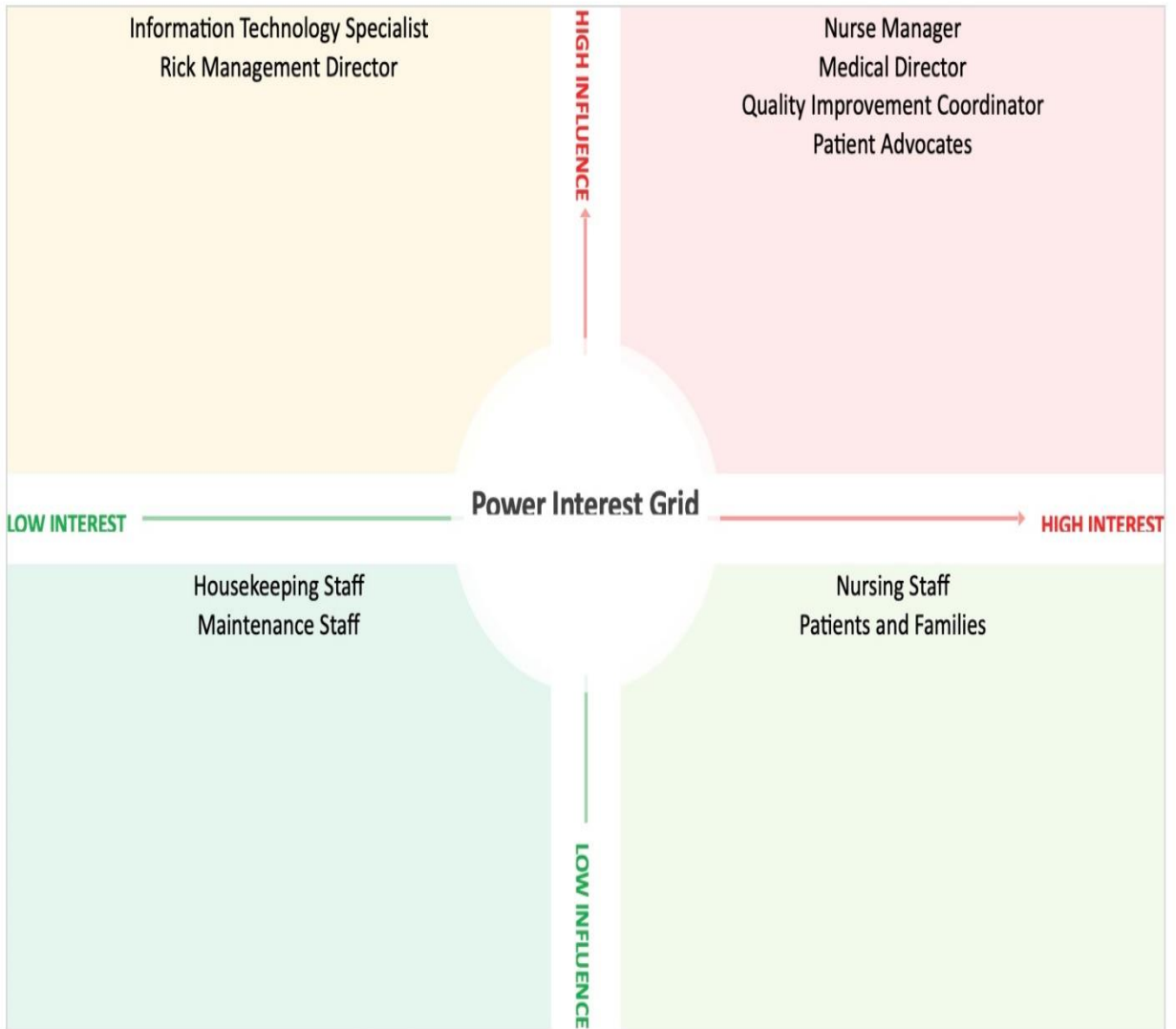
Project Lead	CL
Co-Lead	JM
Care Experience Lead	DM
Falls Lead	JD
Safety Nurse Champions	AS
Care experience nurse champions	KL, HD

Appendix D: SWOT Analysis

Optimizing authentic hourly rounding on a 64-bed telemetry unit.

	Favorable/Helpful	Unfavorable/Harmful
Internal (attributes of the organization)	<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> Hourly rounding helps to identify patient needs in a timely manner, including fall risk assessments and interventions. It promotes effective communication between patients and healthcare providers, which can help build trust and improve patient satisfaction. Hourly rounding can lead to earlier detection of patient falls, allowing for prompt intervention and prevention of further injury. 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> Hourly rounding can be time-consuming for healthcare providers, taking away from other patient care tasks. If not implemented properly, it can become a checklist exercise rather than a meaningful patient interaction. It may not be suitable for all patients, such as those with certain medical conditions or who prefer less frequent interactions with healthcare providers.
External (attributes of the organization)	<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> Hourly rounding can be customized to meet the specific needs of diverse patient populations, such as those with mobility issues or those in high-risk units. It can be used as a tool to improve patient safety and prevent adverse events, such as patient falls. Hourly rounding can be combined with other quality improvement initiatives to enhance patient care and outcomes. 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> Inadequate staffing levels may make implementing hourly rounding consistently and effectively difficult. Healthcare providers may become complacent or resistant to change, leading to decreased engagement and effectiveness of hourly rounding. Failure to properly document hourly rounding activities and outcomes can lead to inaccurate reporting and potential legal issues.

Appendix E: Power Interest Grid



Appendix F: Financial Analysis for Hourly Rounding

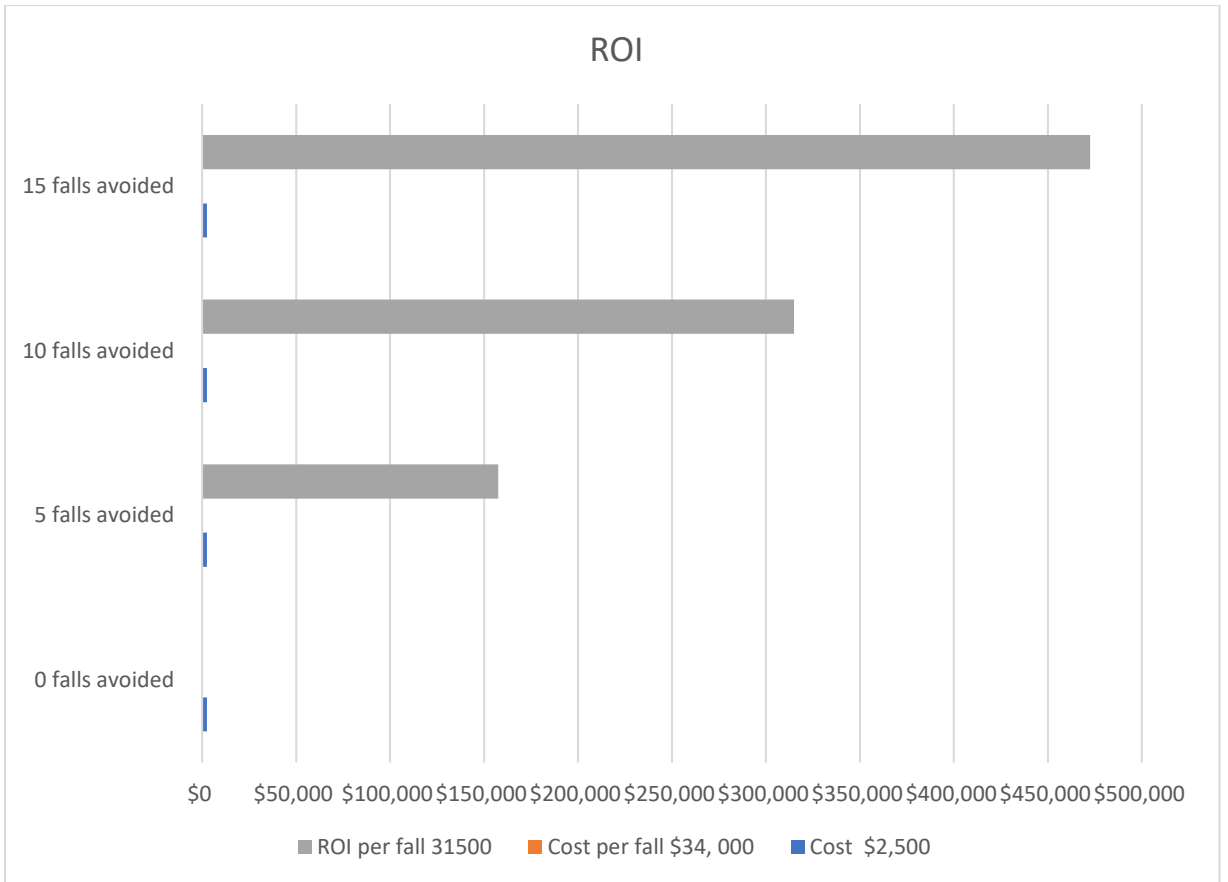
Table: Authentic Hourly Rounding Analysis.			
Table 1:	2022	2023	2024
Falls	20	24	10
Falls with injury	5	6	1
Cost per day (hospital) \$4777 per Finance Director	601,902.00	722,282	300,951
Additional days spent in hospital due to falls (Avg of 6.3 days)	20 x .25% of 20 = 31.5	24 x .25% of 24 = 37.8	10 x .25% of 10 = 2.5
Cost for Radiology scans post fall 3720 average cost (Chargemaster report)	\$174,000	\$190,720	\$87,800

Table 2

Staff education FTE	18hrs x 98.00 = 1,764.00		
Call light integration	TBD		
misc matierals for project rollout	\$1,500.00		
	6 months: fall reduction by 50%	1 year: Fall reduction by 90%	18 months: Fall reduction 100%
estimated cost avoidance	718,997.10	1,294,195	1,416,000.00
Estimated fall reduction	<30	<10	0

Reduction of Falls by 50% in by July 31st, 2024

Appendix G: ROI and Cost Avoidance



Appendix H: PDSA Cycles for Surveying Staff on Hourly Rounding

PDSA #1

PDSA Cycle for Surveying Staff on Hourly Rounding

PLAN:

- Develop a survey questionnaire that includes questions related to staff members' understanding and implementation of hourly rounding.
- Identify the staff members who will participate in the survey.
- Determine the method of survey administration, such as an online survey or a paper-based survey.
- Set a timeline for survey administration and data collection.

DO:

- Administer the survey to the identified staff members.
- Collect the survey responses and record the data.
- Analyze the data to identify trends and patterns in staff members' understanding and implementation of hourly rounding.
- Create a report summarizing the survey results.

STUDY:

- Review the survey results and identify areas for improvement.
- Analyze the data to determine if there are any discrepancies in understanding or implementation of hourly rounding among staff members.
- Identify any barriers or challenges staff members face when implementing hourly rounding.

ACT:

- Develop an action plan to address areas for improvement.
- Provide education and training to staff members on the importance of hourly rounding and how to implement it effectively.
- Monitor the implementation of hourly rounding and provide feedback to staff members on their performance.
- Repeat the survey in a few months to evaluate the effectiveness of the action plan and identify any additional areas for improvement.

OUTCOME: 92% of nursing staff were surveyed. Most staff knew what hourly/authentic rounding was. Surveyed resulted in approximately 90% conveying knowledge of hourly rounding. Since we felt there was not a knowledge gap, we decided to move to the next PDSA of visual auditing of bedside visits.

PDSA #2

PDSA Cycle for a Visual Audit of Hourly Rounding by Nurses

PLAN:

- Identify the key components of effective hourly rounding.
- Develop a visual audit tool to assess whether nurses are completing hourly rounding effectively.
- Determine the sample size of nurses to be audited.
- Train auditors on how to use the audit tool and what to look for during the audit.

DO:

- Conduct the visual audit of hourly rounding by nurses using the audit tool.
- Record the results of the audit in a spreadsheet or database.
- Identify any trends or patterns in the results.

STUDY:

- Analyze the audit results to identify areas where performance is below expectations.
- Determine the root cause(s) of any identified issues.
- Review the audit tool to ensure it measures what it was designed to measure.

ACT:

- Develop and implement an action plan to address any identified issues.
- Retrain nurses on effective hourly rounding as necessary.
- Repeat the visual audit periodically to assess whether the action plan has improved performance.
- Adjust the audit tool as necessary to ensure it captures the most important aspects of effective hourly rounding.

OUTCOME: Most nurses audited displayed proficient bedside visits. The concern is whether these interactions were consistent with typical rounding by nurses since the RNs knew we were there auditing their bedside exchange.

Appendix I: Measurement Strategy

Background (Global Aim): Nurses and patient care techs should collaborate to check in with patients every hour, thus reducing sentinel events and improving the patient care experience and outcomes.

Population Criteria: Adult patients 18 years or older admitted to the 1st floor Med Surge/Telemetry Unit

Data Collection Method: Data was collected from the Quality Department and Midas reports.

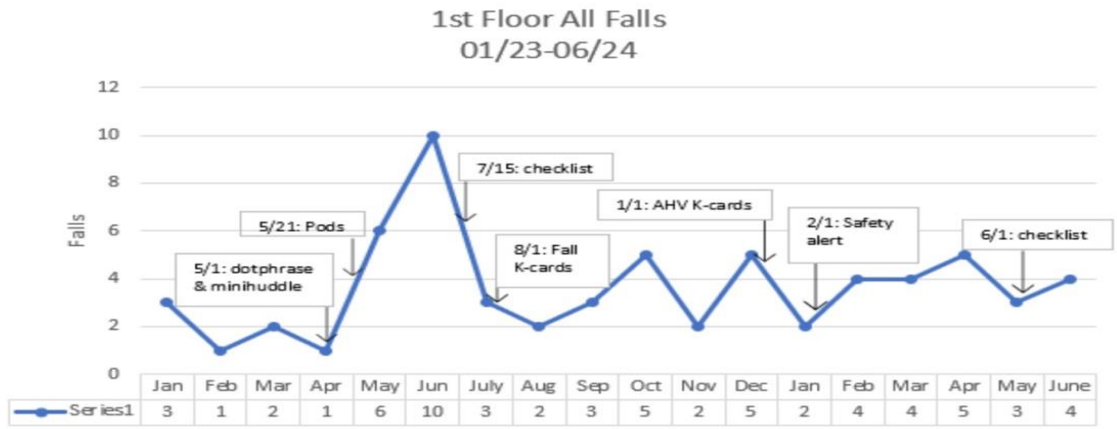
Data Definitions

Data Element	Definition
Fall	Any patient that comes to a seated or laying position on the floor with or without assistance.
AHV	Authentic Hourly Visits
Assisted Fall	Patient assisted to a seated or lying position by staff.
Unwitnessed Fall	The patient was found down on the floor.

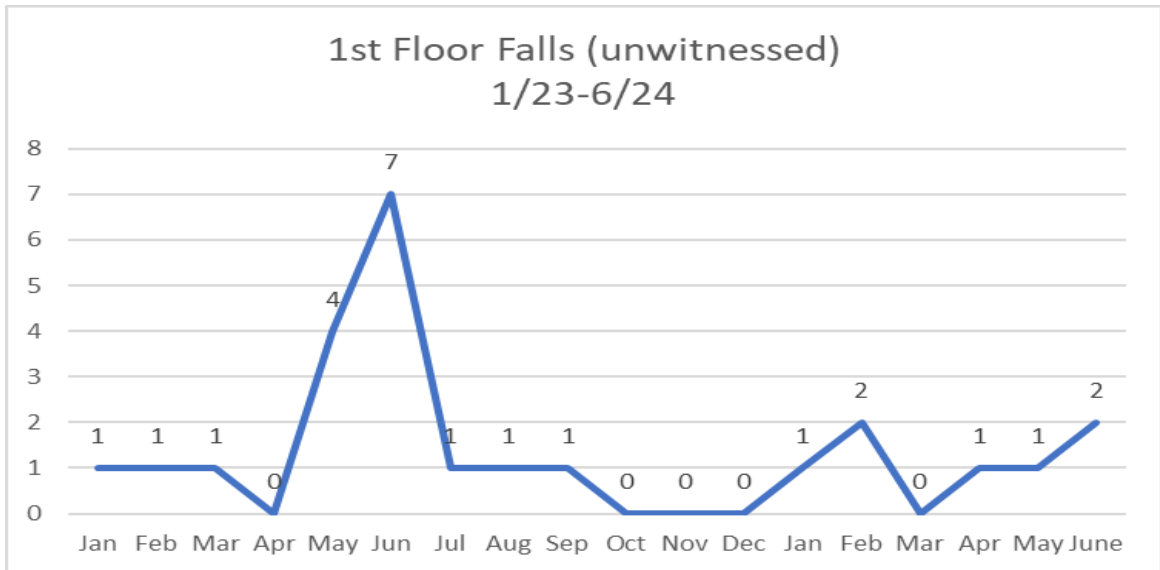
Measure Description

Measure	Measure Definition	Data Collection Source	Goal
# of patient falls	Patient that comes to a seated or laying position on the floor with or without assistance.	Risk Management Quality data	50% reduction
% of AHV completed	The patient was visited each hour, and the 5 Ps were addressed.	Process Tracking tool	100%
% of CLOF assessments completed upon admission.	Clinical level of function assessed; baseline mobility in the hospital setting.	Heath Connect Charting tool	100%

Appendix J: Outcome Data Display

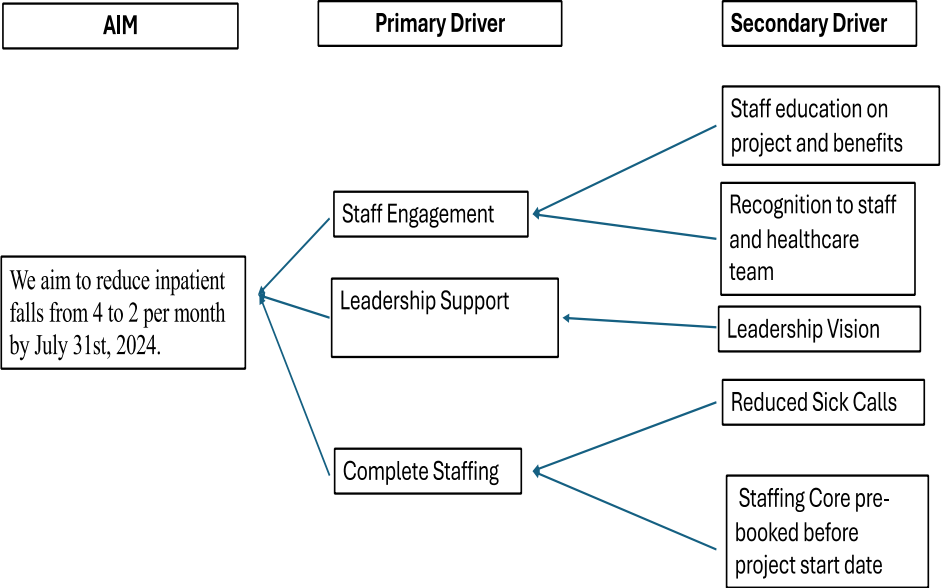


1st Floor—All Falls



1st Floor Falls (unwitnessed)

Appendix K: Driver Diagram



Appendix M: IEB Non-Research Determination Form

CNL Project: Statement of Non-Research Determination Form

Student Name: Charles Langdon

Title of Project: Successful Implementation of Hourly rounding to Impact Falls

Brief Description of Project: From January 1st, 2023 to December 31st, 2023, our hospital system has experienced an increased patient fall rate. There have been approximately 110 falls, with 49 sustaining injuries. Our goal with this QI project is to reduce patient falls by 50% in the first six months. RNs and Pcts will alternate hourly visitations to patients to address the 5 P's, which are: Potty, Pain, Position, Personal belongings, and Pump.

A) Aim Statement: We aim to reduce inpatient falls from 4 to 2 per month by July 31st, 2024

B) Description of Intervention: RN's and PCT's will alternate hourly visitations to patients to address the 5 P's, which are potty, pain, personal belongings, position and pump.

C) How will this intervention change practice? Currently RNs and PCTs are following the standard of care model which means healthcare workers address needs as they arise. This will be a new proactive way of delivering patient care.

D) Outcome measurements: Reduce falls from 4 per month to 2 per month or 50% by July 31st, 2024

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:	YES	NO
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.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive a standard of care.	X	
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.	X	
The project involves the 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.	X	
The project involves the 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.	X	
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.	X	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
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.	X	

If there is an intent to, or possibility of publishing your work, you and the 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>	X	
--	----------	--

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): Charles Langdon

Signature of Student: _____ **DATE** _____

SUPERVISING FACULTY MEMBER NAME (Please print):

Signature of Supervising Faculty Member _____ **DATE** _____

Appendix N: Materials

 SUNSATONAL 1ST FLOOR PLEASE INITIAL YOUR HOUR	K -Card: AHV Revision Date: Room #:		K-Card: AHV Observer: Shift:	
	2300/0000		<p>Observation: Identify an RN or a PCT prior to performing hourly rounding. Go to bedside and complete together.</p> <p>Scripted Feedback (read aloud) <i>"I want to thank you for including me in the observation of this process. I really appreciate knowing firsthand the work that we do within our organization, and I value your contribution to achieving our mission. I am going to provide you feedback both on the items that I noticed you demonstrated strong proficiency with and areas that may present an opportunity to review specific steps that are part of our standard process work."</i></p> <p>After observation:</p> <ol style="list-style-type: none"> 1. Discuss with the observation with the RN. 2. Correct any elements needed in real time. 3. Provide on time education using the JI. 4. Return to white board: <ol style="list-style-type: none"> a. Place K card green side up to indicate the observation was completed in the K Card Holder. 5. Complete the logs to document the observation: 	
	0100/0200			
	0300/0400			
	0500/0600			
	0700	1500		
	0800	1600		
	0900	1700		
	1000	1800		
	1100	1900		
	1200	2000		
	1300	2100		
1400	2200			

Observation: Identify an RN or a PCT prior to performing hourly rounding. Go to bedside and complete together.

Please observe the following:

- Staff explains the purpose of rounding.
- Staff narrates the care/explains the task being done (the "why" and the "what").
- Staff asks the 4P's: PAIN.
- Staff asks the 4P's: PERSONAL NEEDS.
- Staff asks the 4P's: POTTY.
- Staff asks the 4P's: POSITION.
- Staff asks if anything else needs to be done.
- Staff informs when they will return to check on the patient again (in one hour)

Scripted Feedback (read aloud) *"I want to thank you for including me in the observation of this process. I really appreciate knowing firsthand the work that we do within our organization, and I value your contribution to achieving our mission. I am going to provide you feedback both on the items that I noticed you demonstrated strong proficiency with and areas that may present an opportunity to review specific steps that are part of our standard process work."*

After observation:

1. Discuss with the observation with the RN.
2. Correct any elements needed in real time.
3. Provide on time education using the JI.
4. Return to white board:
 - a. Place K card green side up to indicate the observation was completed in the K Card Holder.
5. Complete the logs to document the observation:

Appendix O: Johns Hopkins Evaluation Tool

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Evidence level and quality rating:		_____
Article title:	Number:	
Author(s):	Publication date:	
Journal:		
Setting:	Sample (composition and size):	
Does this evidence address my EBP question?	<input type="checkbox"/> Yes	<input type="checkbox"/> No Do not proceed with appraisal of this evidence.

Is this study:

- **QuaNtitative** (collection, analysis, and reporting of numerical data)

Measurable data (how many; how much; or how often) used to formulate facts, uncover patterns in research, and generalize results from a larger sample population; provides observed effects of a program, problem, or condition, measured precisely, rather than through researcher interpretation of data. Common methods are surveys, face-to-face structured interviews, observations, and reviews of records or documents. Statistical tests are used in data analysis.

Go to **Section I: QuaNtitative**
- **Qualitative** (collection, analysis, and reporting of narrative data)

Rich narrative documents are used for uncovering themes; describes a problem or condition from the point of view of those experiencing it. Common methods are focus groups, individual interviews (unstructured or semistructured), and participation/observations. Sample sizes are small and are determined when data saturation is achieved. Data saturation is reached when the researcher identifies that no new themes emerge and redundancy is occurring. Synthesis is used in data analysis. Often a starting point for studies when little research exists; may use results to design empirical studies. The researcher describes, analyzes, and interprets reports, descriptions, and observations from participants.

Go to **Section II: Qualitative**
- **Mixed methods** (results reported both numerically and narratively)

Both quaNtitative and qualitative methods are used in the study design. Using both approaches, in combination, provides a better understanding of research problems than using either approach alone. Sample sizes vary based on methods used. Data collection involves collecting and analyzing both quaNtitative and qualitative data in a single study or series of studies. Interpretation is continual and can influence stages in the research process.

Go to **Section I** for QuaNtitative components and **Section II** for Qualitative components

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Section I: QuaNtitative			
Level of Evidence (Study Design)			
A. Is this a report of a single research study?		<input type="checkbox"/> Yes	<input type="checkbox"/> No Go to B.
1. Was there manipulation of an independent variable?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. Was there a control group?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Were study participants randomly assigned to the intervention and control groups?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes to questions 1, 2, and 3, this is a randomized controlled trial (RCT) or experimental study.	<input type="checkbox"/> LEVEL I		
If Yes to questions 1 and 2 and No to question 3, or Yes to question 1 and No to questions 2 and 3, this is quasi-experimental (some degree of investigator control, some manipulation of an independent variable, lacks random assignment to groups, and may have a control group).	<input type="checkbox"/> LEVEL II		
If No to questions 1, 2, and 3, this is nonexperimental (no manipulation of independent variable; can be descriptive, comparative, or correlational; often uses secondary data).	<input type="checkbox"/> LEVEL III		
Study Findings That Help Answer the EBP Question			
Complete the Appraisal of QuaNtitative Research Studies section.			

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool



B. Is this a summary of multiple sources of research evidence?		<input type="checkbox"/> Yes Continue	<input type="checkbox"/> No Go to Appendix F
1. Does it employ a comprehensive search strategy and rigorous appraisal method? If this study includes research, nonresearch, and experiential evidence, it is an integrative review. See Appendix F.		<input type="checkbox"/> Yes	<input type="checkbox"/> No Go to Appendix F
2. For systematic reviews and systematic reviews with meta-analysis (see descriptions below): <ul style="list-style-type: none"> a. Are all studies included RCTs? b. Are the studies a combination of RCTs and quasi-experimental, or quasi-experimental only? c. Are the studies a combination of RCTs, quasi-experimental, and nonexperimental, or non-experimental only? <p>A <u>systematic review</u> employs a search strategy and a rigorous appraisal method, but does not generate an effect size.</p> <p>A <u>meta-analysis</u>, or systematic review with meta-analysis, combines and analyzes results from studies to generate a new statistic: the effect size.</p>	<input type="checkbox"/> Level I <input type="checkbox"/> Level II <input type="checkbox"/> Level III		
Study Findings That Help Answer the EBP Question			
Complete the Appraisal of Systematic Review (With or Without a Meta-Analysis) section.			

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Appraisal of QuaNtitative Research Studies			
Does the researcher identify what is known and not known about the problem and how the study will address any gaps in knowledge?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was the purpose of the study clearly presented?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was the literature review current (most sources within the past five years or a seminal study)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was sample size sufficient based on study design and rationale?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If there is a control group: ••Were the characteristics and/or demographics similar in both the control and intervention groups?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
••If multiple settings were used, were the settings similar?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
••Were all groups equally treated except for the intervention group(s)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are data collection methods described clearly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Were the instruments reliable (Cronbach's α [alpha] > 0.70)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Was instrument validity discussed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
If surveys or questionnaires were used, was the response rate \geq 25%?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Were the results presented clearly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
If tables were presented, was the narrative consistent with the table content?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Were study limitations identified and addressed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Were conclusions based on results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Go to Quality Rating for QuaNtitative Studies section			
Appraisal of Systematic Review (With or Without Meta-Analysis)			
Were the variables of interest clearly identified?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was the search comprehensive and reproducible? ••Key search terms stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
••Multiple databases searched and identified	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
••Inclusion and exclusion criteria stated	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Was there a flow diagram that included the number of studies eliminated at each level of review?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Were details of included studies presented (design, sample, methods, results, outcomes, strengths, and limitations)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Were methods for appraising the strength of evidence (level and quality) described?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Were conclusions based on results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Results were interpreted.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Conclusions flowed logically from the interpretation and systematic review question.	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Did the systematic review include a section addressing limitations <i>and</i> how they were addressed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Quality Rating for QuaNtitative Studies		
Complete quality rating for quaNtitative studies section.		
<p>Circle the appropriate quality rating below</p> <p>A High quality: Consistent, generalizable results; sufficient sample size for the study design; adequate control; definitive conclusions; consistent recommendations based on comprehensive literature review that includes thorough reference to scientific evidence.</p> <p>B Good quality: Reasonably consistent results; sufficient sample size for the study design; some control, and fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence.</p> <p>C Low quality or major flaws: Little evidence with inconsistent results; insufficient sample size for the study design; conclusions cannot be drawn.</p>		
Section II: QuaLitative		
Level of Evidence (Study Design)		
A. Is this a report of a single quaLitative research study?	<input type="checkbox"/> Yes Level III	<input type="checkbox"/> No Go to Section II. B
Study Findings That Help Answer the EBP Question		
Complete the Appraisal of Single QuaLitative Research Study section.		

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Appraisal of a Single Qualitative Research Study		
Was there a clearly identifiable and articulated:		
••Purpose?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Research question?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Justification for method(s) used?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Phenomenon that is the focus of the research?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Were study sample participants representative?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Did they have knowledge of or experience with the research area?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Were participant characteristics described?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Was sampling adequate, as evidenced by achieving saturation of data?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Data analysis:		
••Was a verification process used in every step by checking and confirming with participants the trustworthiness of analysis and interpretation?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
••Was there a description of how data were analyzed (i.e., method), by computer or manually?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do findings support the narrative data (quotes)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do findings flow from research question to data collected to analysis undertaken?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are conclusions clearly explained?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Go to Quality Rating for Qualitative Studies section.		
B. For summaries of multiple qualitative research studies (meta-synthesis), was a comprehensive search strategy and rigorous appraisal method used?	<input type="checkbox"/> Yes Level III	<input type="checkbox"/> No Go to Appendix F.
Study Findings That Help Answer the EBP Question		
Complete the Appraisal of Meta-Synthesis Studies section.		

Johns Hopkins Nursing Evidence-Based Practice Appendix E: Research Evidence Appraisal Tool

Appraisal of Mixed Methods Studies ³			
Was the mixed-methods research design relevant to address the quantitative and qualitative research questions (or objectives)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Was the research design relevant to address the quantitative and qualitative aspects of the mixed-methods question (or objective)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
For convergent parallel designs, was the integration of quantitative and qualitative data (or results) relevant to address the research question or objective?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
For convergent parallel designs, were the limitations associated with the integration (for example, the divergence of qualitative and quantitative data or results) sufficiently addressed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Quality Rating for Mixed-Methods Studies			
<p>Circle the appropriate quality rating below</p> <p>A High quality: Contains high-quality quantitative and qualitative study components; highly relevant study design; relevant integration of data or results; and careful consideration of the limitations of the chosen approach.</p> <p>B Good quality: Contains good-quality quantitative and qualitative study components; relevant study design; moderately relevant integration of data or results; and some discussion of limitations of integration.</p> <p>C Low quality or major flaws: Contains low quality quantitative and qualitative study components; study design not relevant to research questions or objectives; poorly integrated data or results; and no consideration of limits of integration.</p>			

¹ https://www.york.ac.uk/crd/SysRev/ISSI/WebHelp/6_4_ASSESSMENT_OF_QUALITATIVE_RESEARCH.htm

² Adapted from Polit & Beck (2017).

³ National Collaborating Centre for Methods and Tools. (2015). *Appraising Qualitative, Quantitative, and Mixed Methods Studies included in Mixed Studies Reviews: The MMAT*. Hamilton, ON: McMaster University. (Updated 20 July, 2015) Retrieved from <http://www.nccmt.ca/resources/search/232>