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Quality Improvement Project
Fall Prevention Among Older Adults in SNF Through Staff Education and Hourly
Rounding

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NURS 8263 DNP Project

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Abstract

Falls among elderly individuals in Skilled Nursing Facilities (SNF) pose a widespread and significant healthcare challenge, often resulting in severe injuries, reduced quality of life, and increased healthcare expenses. Despite the current efforts to prevent falls, they still occur frequently, underscoring the importance of effective interventions for prevention. This Doctor of Nursing Practice (DNP) project focuses on quality improvement (QI) in healthcare. It aims to reduce fall rates among older adults in SNF by providing staff education and implementing scheduled hourly rounding. This approach aligns with existing research, emphasizing the importance of proactive patient monitoring and improved staff knowledge in preventing falls. The major findings from this project indicated significant progress in staff knowledge and a noticeable decrease in fall occurrences. An assessment of staff knowledge on fall prevention revealed a 40% knowledge boost, with pre-test scores averaging 49.9% and post-test scores averaging 69.5%. The data was analyzed and compared using a paired t-test to assess the effectiveness of education. Moreover, data on fall rates gathered over three weeks displayed a 42.9% decline in fall incidents. These findings imply that staff education and structured hourly rounding effectively heighten staff awareness and proactive care, resulting in safety. Nonetheless, the limited sample size and short monitoring period suggest the necessity for investigation to validate the long-term effectiveness and broader relevance of these strategies.

Keywords: Fall prevention, skilled nursing facility, older adults, staff education, falls

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Fall Prevention Among Older Adults in SNF Through Staff Education and Hourly Rounding

SECTION I: INTRODUCTION

According to the Centers for Disease Control and Prevention (2023), falls are one of the predominant reasons for fatal and nonfatal injuries among older adults, especially those residing in Skilled Nursing Facilities (SNFs) and Long-Term Care Facilities (LTCFs). Not every fall results in injuries, but 37% of individuals who experience a fall end up with injuries that require attention or restrict their ability to participate in specific activities (CDC, 2023). Falls among individuals residing in nursing facilities pose a substantial concern, impacting both the individuals and the healthcare system.

The distinctive patient population within SNFs often comprises individuals with heightened vulnerability, characterized by advanced age, multiple comorbidities, prolonged length of stay, polypharmacy, and functional decline (Anu, 2021). It is estimated that 30% to 51% of patients experience a fall during their stay in the SNF and LTCF, much higher than in acute care hospital settings (Anu, 2021). Consequently, there is an urgent requirement for evidence-based measures to prevent falls and improve patient safety and the standard of care provided within these facilities. According to Coughlin et al. (2019), knowledgeable and proactive staff in an SNF have a significant role in lowering the incidence of falls among residents. Regularly checking on patients throughout the day allows nurses to anticipate their needs and implement evidence-based strategies to prevent falls. This Quality Improvement (QI) project aims to decrease the number of falls among adults living in SNFs through staff education and hourly rounding. The project aims to make a difference in the quality of life for older adults

residing in skilled nursing facilities, with the overarching objectives of enhancing healthcare quality and raising the standards of nursing care.

Background of the Problem

As people grow older, they become more vulnerable to fall-related health hazards. As per the CDC (2023), more than 14 million older adults report falling; compared to their total population, this is one in every four adults. Even if not all patients get injuries from falling, nearly 37% of cases become medical issues or result in physical decline (Kakara et al., 2023). A sizable portion of adult fatalities resulting from injuries occur as a result of falls. Death rates from falls adjusted to this age group are increasing; in 2012, the rates were 55.3 deaths per 100,000 adults, while in 2021, they rose to 78 per 100,000 adults (CDC, 2023).

Organizations must establish and continuously enhance a safety culture, as patient safety is the basis of high-quality care. In nursing facilities (SNFs), nursing staff must take measures that prevent residents from experiencing falls and the resulting injuries. Each year, medical expenses connected to older adults fall to \$50 billion; of these, \$754 million are for fatal injuries (Florence et al., 2018). Fall among residents in SNF leads to injuries, hospital transfer, increased length of stay, and associated healthcare costs.

There is an urgent need for healthcare organizations to develop and uphold a culture of patient safety since this is the foundation of high-quality healthcare. The safety of all SNF residents should be prioritized so that they can strive to avoid falls and fall-related injuries. The fall prevention strategies to be implemented should be able to address all the multifactorial components of the problem, like the physical, psychological, functional, and educational aspects (Anu, 2021). Therefore, nurses must collaborate with other disciplines to address reducing falls and injuries related to falls.

Patient falls in hospital settings are a global issue, prompting many efforts to prevent them from occurring. Incidents of falls in acute hospitals and emergency departments are two to eight per 1000 beds (Kakara et al., 2023). In rehabilitation hospitals where patient mobility is actively encouraged, fall rates often range from three to sixteen per 1,000 bed days (Morris et al., 2022). These falls frequently result in injuries, with approximately 30% of hospital falls leading to various degrees of harm (Anu, 2021). Such injuries can encompass minor wounds such as lacerations, contusions, sprains, and strains, as well as more severe consequences like head injuries, fractures, and even mortality (Morris et al., 2022). Furthermore, the experience of a fall gives a patient anxiety; thus, they fear another fall.

A range of preventive strategies has been adopted to address hospital falls, which includes patient education, staff education, modifications in the hospital environment, utilization of assistive devices, prescribed therapeutic exercises, medication reviews, focus on optimal nutrition, management of cognitive impairment, and the establishment of falls prevention policies and robust leadership systems (Morris et al., 2022). Noteworthy examples of these systems involve post-fall team discussions, including fall reports during nursing handovers and implementing monthly fall auditing and reporting (Morris et al., 2022). Some of these interventions have been individually assessed, while others have been examined within a multifaceted approach to mitigating hospital falls.

Despite these measures, patients often do not fully comprehend their susceptibility to falls while hospitalized, even though individuals aged 65 and above and those aged 50 and above with two or more concurrent health conditions are identified as particularly high-risk groups (CDC, 2023). Past research has shown evidence supporting the efficacy of interventions to mitigate hospital falls, concluding that multifactorial interventions might reduce falls. However,

this effect is more noticeable within rehabilitation or geriatric wards, albeit with low-quality evidence.

Efforts to curtail patient falls in hospital settings are continuously evolving. This prompts a critical assessment of the effectiveness of existing preventive strategies and the identification of more comprehensive and robust approaches to ensure patient safety and well-being during their hospital stay (Morris et al., 2022). By understanding the complexities and consequences of hospital falls, healthcare providers can make informed decisions to minimize the risks and improve the quality of care for patients vulnerable to such accidents.

In nursing facilities, the effectiveness of preventing falls is often hindered by a lack of knowledge among the staff and the absence of standardized fall prevention protocols. Education for staff members in nursing facilities that emphasize fall prevention and hourly rounding is crucial in improving patient safety and the quality of care. A staff education program for fall prevention can reduce this risk (Coughlin et al., 2019). Staff education should focus on the critical elements of scheduled hourly rounding and the methods of rounding.

The current fall prevention policies at the SNF were examined in detail for their effectiveness and the need for improvement. Fall rate data from the facility is reviewed and analyzed to identify the extent of the problem. Data and recommendations from national, state, and local levels were analyzed. This includes Texas Health and Human Services, the American Nurses Association (ANA), the Centers for Medicare and Medicaid Services (CMS), and the Agency for Healthcare Research and Quality (AHRQ). Stakeholders' input was analyzed in this process to identify areas for improvement and possible resolutions. Residents, families, Director of Nursing (DON), Assistant Director of Nursing (ADONs), Registered Nurses (RN), Licensed Vocational Nurses (LVN), Certified Nursing Assistants (CNAs), physical and occupational

therapists, and administrators are all stakeholders at the SNF. The current strategy at the facility comprises standard fall precautions and two hourly rounds by nursing staff. However, there is no written policy and procedure for scheduled hourly rounding. The above stakeholders unanimously verbalized and agreed on the need for evidence-based intervention to decrease the number of falls in the facility using a scheduled rounding protocol.

The scheduled rounding protocol recommended by AHRQ has been widely practiced in healthcare settings with improved outcomes in this patient population (*Tool 3b: Scheduled Rounding Protocol*, 2013). The facility's staff will receive education and training as part of the QI project to ensure effectiveness and adherence to scheduled rounding protocols, which will improve staff knowledge and lower fall rates. The role of the Principal Investigator (PI) in the DNP project on staff education to prevent falls in the skilled nursing facility is to oversee the design, implementation, and evaluation of the educational program and hourly rounding to ensure its effectiveness and adherence to evidence-based practices.

Regularly checking in with residents and addressing their toileting needs, managing their pain, assisting with activities, and promoting mobility is an approach known as hourly rounding. Nursing rounds can vary depending on the health facility but usually involve pain management, position change, comfort and environment, and toileting. This approach directly reduces the risk of falls. However, staff must receive education on the techniques and objectives of hourly rounding to ensure effective execution. To gauge the effectiveness of education and training, evaluating staff knowledge before and after their training sessions is essential. Nurses should be familiar with the care plan and take care of the holistic nursing needs (Althobaiti, 2019). According to Jenko et al. (2019), the 4Ps method can promptly address the needs of the scheduled rounding protocol. This method, also known as purposeful rounding, provides nursing

care that anticipates and satisfies patient needs. Evidence-based hourly rounding is thought to enhance quality, safety, and satisfaction.

The 4Ps are essential elements of rounding that increase its effectiveness. Althobaiti et al. (2019) reported that using the 4Ps in hourly rounding can reduce falls by 50%, call bell uses by 37%, pressure ulcers by 14%, and increase satisfaction scores by 12%. They found that ensuring patients can reach their items and helping them with their bathroom needs on time cut the fall rate by half. The study claimed that the 4Ps had the most impact on reducing falls compared to other factors.

The scheduled hourly rounding focused on 4Ps is a method of checking on patients every hour and addressing their pain, potty, positioning, and possessions (Althobaiti, 2019). Initially, pain assessment and management are done. Secondly, the nurse asks the patient if they need to go to the toilet, which may take a short or long time. The third step is to ensure the patient is comfortable, for example, by changing their posture from lying down to sitting up or changing their sleeping position. The last step is ensuring the patient can reach their items, such as glasses, mobile phones, and books. The 4Ps help to standardize the care, promote consistency, and guide the nurses (Althobaiti, 2019). Improving the comprehension and dedication of staff members towards rounding can create an environment of caregiving, resulting in fewer falls and better safety and satisfaction for residents.

In conclusion, the staff education program in an SNF aims to prevent falls by improving staff knowledge and adherence to hourly rounding protocols. Through this approach, the facility can effectively decrease fall occurrences, enhance patient safety, and possibly reduce healthcare costs. This effort benefits the nursing facility at the micro-level by ensuring residents' safety and

highlighting the effectiveness of educational interventions and scheduled rounding in fall prevention within the wider healthcare system.

Review and Summary of Relevant Literature

PICOT Question

Among adults aged 65 and older in Skilled Nursing Facility (SNF), does staff education and the implementation of hourly rounding compared to the current protocol impact the number of falls in four weeks?

Population

This study's target population comprises RNs, LPNS, and CNAs in an SNF.

Intervention

The intervention involves educating clinical staff and implementing hourly rounding. Training sessions will be conducted for the staff to ensure understanding and adherence to the scheduled hourly rounding protocol.

Comparison

The project will compare the knowledge levels of RNs, LPNs, and CNAs before and after education sessions and fall rates two weeks before and two weeks after the implementation of hourly rounds.

Outcome

The goal is to lower the number of falls among the older residents of the SNF by implementing hourly rounding. Moreover, the study aims to improve staff knowledge and observe an improvement in staff compliance with the hourly rounding protocol.

Time

The study will be carried out over four weeks to assess the impact of the intervention.

Search Strategy

A focused literature review was conducted by searching through databases, including CINAHL, PubMed, EBSCO, Google Scholar, BioMed Central, and NIH to identify relevant articles for the research question “Among adults aged 65 and older in SNF, does staff education and the implementation of hourly rounding compared to the current protocol impact the number of falls in four weeks?”. The keywords for search include "fall prevention," "older adults," "skilled nursing facility," "hourly rounding", and "staff education" to find relevant studies and publications on the topic. A total of 17 most relevant titles emerged from the initial search: fall prevention in long-term care facilities, fall prevention for the elderly, fall prevention in nursing homes, models and reviews of fall prevention that apply generally and to elderly care, or rounding in fall prevention. Three records were duplicates across different publications, and five were inaccessible behind a paywall. The search was further narrowed to peer-reviewed articles within the last five years.

Review of Articles

Research in hospital facilities has examined fall prevention in the context of care quality improvement. Spano-Szekely et al. (2019) conducted a quality improvement initiative to mitigate falls in a community hospital with a 245-bed capacity and a 3.21 fall rate. The methodology involved an initial gap analysis by an interprofessional team. Subsequently, the team developed a clinical guideline with seven best-practice areas for customized fall prevention. Targeted interventions would then be enacted over a risk-level criterion, including mobility assessments by nurses, video surveillance, and purposeful hourly rounding, and the targets were predominantly impulsive patients. The program resulted in a 72% decline in costs related to falls, with the fall rate reducing to 1.14 from 3.21, and thus less need to use sitters (Spano-Szekely et

al., 2019). An outstanding aspect of the intervention was individualized fall prevention interventions.

Improving the level of knowledge of staff members regarding fall prevention through education plays a role in recognizing and addressing fall risks within healthcare environments and enhances patient safety. Leverenz & Lape (2018) conducted a pilot study in a long-term care facility located in Illinois, United States of America (USA). Their main objective was to enhance the self-confidence of nursing staff in preventing falls. The program was mandatory for eight participating staff members and focused on implementing strategies to prevent falls. Surveys were conducted before and after the intervention to use self-efficacy to prevent falls. The results showed significant improvements in self-confidence among nursing assistants. This study emphasizes the effectiveness of targeted education in boosting staff confidence and skills regarding fall prevention (Leverenz & Lape, 2018). It suggests that providing staff education could play a role in reducing falls in long-term care settings.

In addition to staff education, rounding interventions require augmentation with other support factors. Zubkoff et al. (2019) examined hourly rounding within a 6-month multifaceted fall prevention quality improvement initiative across 26 SNF-level Veterans Health Administration facilities. The longitudinal pre-post study incorporated education, training, and leadership support to implement regular rounding and universal fall precautions. The results showed decreased minor and moderate fall-related injuries but no notable change in overall falls or significant injuries. The lack of randomization, inconsistent rounding implementation across units, and multiple co-interventions confound the direct impact of rounding. Therefore, the quality of rounding-related evidence of healthcare outcomes needs to be robust and specific to the context of measures taken.

Similarly, Anu (2021) conducted a research project whose aim was to advance the safety of residents through a reduction in the number of falls and assess the efficiency of an education program after implementing the pilot hourly rounding. One of the main objectives of the evidence-based hourly rounding program was to evaluate how the staff complied with the 4 P's; these are the central tenets of hourly rounding, emphasizing documentation of the rounding log. The study design of Anu's (2021) project was a case study design; this was attained by looking at the impacts of education programs and implementing hourly rounding in combination with intervention measures that address the safety of the residents in the unit of interest. They then offered an education program that focused on enlightening nurses on the intricacies of hourly rounding and how to document their rounding. The population sample in this study was older adults aged 65 and above, both males and females, in a selected resident's unit. The hourly rounding tool utilized was the Studer Group competency checklist and log (Anu, 2021).

After the implementation of the project, it was noted that there was a change in the staff behavior and practice in a way that denoted improvement of performance. The pilot unit used in this project's nursing home was successful, and the evidenced-based practice had an incredible outcome as fall rates finally decreased. Their results were as follows: the following months after the intervention saw the number of falls reduce. Data from the three months before implementation had it that there was a total of 41 falls in that period, and then three months after the performance of the project, there were only 15 recorded falls; this shows that there was a decrease of about 36% in the number of falls in that total period (Anu, 2021). The nurses reported that the performance of hourly rounding made them understand how taking charge to know the needs of the residents is better than waiting to react to them. Even though the

implementation of hourly rounding is primarily done in the hospital, the outcome of this project indicated that it is transferable to a nursing home.

O'Brien (2020) details an eight-week intervention study to reduce falls among elderly residents in a 29-bed assisted-living facility. The study's quasi-experimental design focuses on implementing purposeful hourly rounding using the 4 Ps approach. The project involved 26 employed nurses and CNAs who underwent educational training sessions to enhance their understanding of falls among older adults and the proposed intervention. Data analysis was conducted through pre- and post-educational surveys, fall-rate calculations, and compliance monitoring with the hourly rounding intervention. Key findings indicated a significant reduction in the fall rate by 58.4% during the eight-week implementation period, with 7.7% falls post-intervention (O'Brien, 2020). Notably, the purposeful hourly rounding with the 4 Ps approach positively impacted residents' safety, as evidenced by reduced call bell usage and increased proactive resident care.

The findings from O'Brien (2020) support the proposed quality improvement project. Notably, the successful reduction in fall rates through purposeful hourly rounding underscores the potential efficacy of this intervention strategy among the elderly in SNF and LTCH. Furthermore, the emphasis on staff education and engagement aligns with this project's goal of implementing evidence-based interventions that enhance patient safety and care quality.

Jenko et al. (2019) conducted a project that evaluated Intentional Rounding (IR) in an SNF. The project occurred in a unit of an SNF that had 120 beds, but only 60 were used. The nurses and CNAs were part of the team. The project used a pre/post-intervention design and the Plan-Do-Study-Act (PDSA) framework. The intentional rounding implemented was assessed by looking at the nurse's knowledge of the fundamental 4Ps involved: Potty, Position, Possessions,

and Pain, and by tracking the number of falls and lost possessions of the residents. The data from Jenko et al.'s (2019) study showed that the certified nursing assistants received the change in practice quite well, and they exhibited a difference in the quality of care they offered, improved patient safety, and were more satisfied with their occupation than before. They recommended replicating these findings in another project in a different skilled nursing facility.

In ZubKoff et al.'s (2019) study, 26 Senior Veterans Homes (SVHs) engaged in a Virtual Breakthrough Series (VBTS) to diminish preventable falls and fall-related injuries in SVHs. Throughout the project, teams attended educational sessions, received customized guidance, and provided progress reports. Intentional rounding, a strategy involving regular check-ins with residents to address their needs promptly, was widely adopted in the study. For instance, the initiative emphasized assisting residents with timely access to the bathroom before urgency levels escalated. The SVH teams that took part in the project made various changes in how they provided care to prevent falls and injuries from falls. While no statistically significant enhancements were observed in the overall fall rate, notable progress was evident in mitigating general and minor injury rates. The valuable insights gained from this endeavor may benefit other SVH facilities aiming to elevate their fall prevention programs.

Another study by Roberts et al. (2020) conducted a pilot randomized clinical trial to test the effect of rounding every 20 minutes on falls among residents in nursing homes with high fall risk and cognitive impairment. One goal was to measure the feasibility of the intervention by getting feedback from staff and residents. The study expected that 20-minute rounding would increase falls among those who did not participate in the aged care facilities, reduce falls among residents in the group that received the intervention compared to those that did not, and not create an unreasonable workload for nurses and other staff members. This research comprised

two primary segments: (i) a comprehensive examination of all combined aged care sites and (ii) a specific focus on residents from aged care sites chosen for inclusion in the intervention.

Six aged care facilities in south-eastern Australia were asked to join the study, and five agreed (A, B, C, D, E). These facilities had different beds: 39, 12, 50, 45, and 19, respectively. Exclusion criteria were used on the sixth one. Participants enlisted for the intervention were recruited from the five aged care sites. Inclusion criteria for these participants, aged between 66 and 99 years, encompassed a high fall risk accompanied by some degree of cognitive impairment, with a history of at least one fall within the previous 12 months.

According to Robert et al.'s (2020) study, the main results were as follows: the total number of falls in the aged care facilities tended to go down, and there was no apparent difference in the number of falls between the intervention and control group, and the staff expressed difficulty managing the 20-minute rounding intervals. These findings hold significance as they suggest that such a rigorous level of intervention might not yield sufficient benefits in reducing falls, especially considering the substantial resource requirements. The number of falls for all residents in the five aged care facilities decreased during the intervention compared to the previous six months; this means that the intervention of rounding every 20 minutes did not increase the fall risk for other residents (Robert et al., 2020). This study showed that performing rounding more than every hour was not beneficial or cost-effective.

Fall prevention has been approached from the viewpoint of health behavior and quality improvement regarding the decisions and actions caregivers can take to prevent or fail to prevent falls (Sleet & Dellinger, 2020). The goal to reduce falls and enhance behavior change is usually explained through models, examples being the transtheoretical model, self-efficacy models, adult education or training models, and decision-making models (Vandervelde et al., 2023). For

example, in the transtheoretical model, the users pre-contemplate a problem and its context, contemplate its solution, prepare to change the matter, take action, maintain the action or intervention, and terminate it. Comparatively, the PDSA model captures decision-making, behavioral execution, and, thus, the execution of change, which makes it widely applicable as a quality improvement model in single-intervention scenarios (Kwoy & Lam, 2022).

Similarities and Dissimilarities of the Article

The reviewed articles emphasize the importance of educating staff and implementing interventions like hourly rounding to prevent falls in healthcare settings. However, there are variations among the studies in terms of the context. For instance, they were conducted in healthcare settings such as hospitals, long-term care facilities, and assisted living centers. The intensity of interventions also varied, with some implemented every hour and others every 20 minutes. Furthermore, the outcomes measured differed across studies, including fall rates, self-efficacy levels, and staff satisfaction. While some studies reported reductions, others did not observe any changes. These findings highlight the complex nature of fall prevention strategies.

Summary of Literature Review

The literature reviewed indicates that the most evidence-based approach to fall prevention is through a quality improvement perspective. Evidence emerges through gap analyses, controlled trials, and customized interventions suitable to the context of care or individual patient risks. Hourly rounding interventions are valuable, and implementation through purposeful rounding contributes to fall rate reductions depending on other factors in healthcare (Anu, 2021). Rounding interventions work in the context of support factors, necessitating effective intervention design and testing for robust evidence to understand the effects of measures taken. The need for practical design and quality evidence exists in a context of

constraints like resource challenges and complexity of care, e.g., numerous patients' needs and risks of non-compliance by caregivers. One of the improvement approaches is to use optimal rounding intervals that balance the pursuit of high efficacy and feasibility for sustainable implementation in SNFs (Jenko et al.,2019). Therefore, there is a need to establish whether a particular rounding interval is efficacious for specific contexts and patient groups.

The available evidence in the literature shows the feasibility of hourly rounding in diverse scenarios, with systematic reviews showing consistent evidence supporting the rounding for fall rate reductions. Before-and-after studies are useful for implementing such interventions wherever RCTs are infeasible or challenging; there is an emphasis on pragmatic research approaches. In selecting the PDSA, the practicality of the intervention increases, and fall prevention is also approached from a quality improvement perspective.

Statement of the Problem

Falls pose an issue for the well-being of individuals in nursing homes and long-term care facilities, which is why they are a significant public health concern. In the United States, hospitals report about 700,000 to 1,000,000 falls annually (AHRQ, 2022). Patient falls in SNF lead to acute care hospital transfer, increased length of stay, and associated financial burden for the facility. To ensure the safety of patients' healthcare facilities need to implement a robust fall prevention program that aims to minimize the incidence of patient falls. Every year, about 1800 people who live in nursing homes die from falls. Those who survive may fear getting hurt again, which can lower their quality (Nursing Home Abuse Center, 2023). In the case of older adults in the US, the death rate has spiked to 30% in the last ten years, thus a fall for every four adults (CDC, 2022).

The AHRQ suggests universal fall prevention strategies, including a scheduled rounding protocol. However, purposeful hourly rounding is not constantly incorporated into these universal strategies. The facility's current rounding protocol is every two hours, whereas hourly rounding is practiced in most healthcare settings, including SNFs and LTCFs. Therefore, this project aims to use staff education and implement a scheduled hourly rounding protocol from AHRQ to decrease falls and improve patient outcomes in SNFs.

Lack of knowledge among staff regarding scheduled rounding procedures can result in improper rounding procedures and a rise in the incidence of falls among residents. This could lead to injuries, reduced mobility, and a decline in residents' health and well-being. Moreover, the facility might encounter escalated healthcare expenses, legal liabilities, and harm to its reputation. Neglected fall hazards could also strain staff resources and dampen morale, ultimately compromising the quality of care provided. Proactively educating staff members and ensuring compliance with scheduled rounds is critical to minimizing these risks and upholding patient safety and quality of care.

Purpose of the Project

The project aims to decrease the incidence of falls among older adults in SNF through staff education and the implementation of hourly rounding in four weeks. This target is based on the unit director's and stakeholders' feedback and the literature's evidence. The staff will be trained and reminded to use hourly rounding correctly and consistently to improve patient outcomes. The management team supports this project and expects the staff to follow hourly rounding for patient care. Assessments will be conducted before and after training sessions to assess the enhancement of staff knowledge following training sessions (Anu, 2021). These assessments can measure how well knowledge has been retained and applied. Furthermore,

monitoring performance indicators like the rate of falls before and after the training can offer evidence of the training's impact in real-world scenarios.

Before starting the project, the goal is to have 100% of the staff attend the education sessions. The team will sign that they have completed the education session and agree to use hourly rounding as part of their patient care routine. Following hourly rounding is crucial for the expected outcome of reducing falls. Ensuring staff know how to do hourly rounding properly will increase their support and could significantly improve outcomes (Althobaiti, 2019). The project will monitor the nurses' compliance with the protocol, and ongoing education will be provided as needed. The fall rate at the facility will be assessed before the educational sessions and implementation of rounding.

The project aims to have 100% of the staff do hourly rounding, which includes RNs, LPNs, and CNAs. By educating the staff regarding the significance and practical implementation of hourly rounds, the project strives to enhance their capability to predict and address the requirements of individuals (Anu, 2021). This proactive strategy aims to reduce the risks linked to falls, including instances where assistance with mobility or using the restroom is delayed. Hourly rounding protocols are implemented to guarantee the safety and comfort of patients and discourage them from engaging in activities without assistance that may result in falls. This project aims to establish a scheduled hourly rounding protocol that incorporates AHRQ's scheduled rounding protocol into caregiving practices. This will cultivate an atmosphere of attentiveness and safety, benefiting residents and staff members alike (Althobaiti, 2019). The fall rates before the implementation of the QI project will be compared to the fall rates after the implementation, together with staff knowledge improvement to evaluate the project outcome.

Scope, Limitations, Delimitations, Change, and Change Framework

Scope

This project's scope covers staff education and the implementation of hourly rounding to prevent falls among adults in SNF. It aims to lower the number of falls among individuals residing in the nursing facility, enhance patient safety, and improve the quality of care provided. The targeted population for the QI project is RNs, LPNS, and CNAs in an SNF. Clinical staff hired after the education sessions and per diem agency staff are excluded from the project to ensure its credibility.

The project will include training and educating nurses and nurse technicians to comprehensively understand the components of scheduled hourly rounding and why it is crucial in reducing fall rates among the residents. A systematic tracking and monitoring system also evaluates how the staff complies with the new practice. Data collection and analysis will be conducted over four weeks, comparing the staff knowledge of fall prevention before and after education sessions and fall rates among residents two weeks before and after project implementation. The assessment of how the intervention has impacted the general safety and well-being of the residents is part of the scope, particularly the reduction of falls and related injuries.

Furthermore, the project aims to foster a culture of patient safety within the SNF, highlighting the importance of proactive strategies, interdisciplinary collaboration, and effective communication among healthcare providers. By focusing on the above scope, the project seeks to establish a sustainable framework for fall prevention that promotes a safe and conducive environment for elderly residents within the SNF.

Limitations

The project, however, faces some limitations that may impact its implementation and evaluation. Firstly, the project's duration is limited to four weeks, which might constrain the ability to observe the long-term effects and sustainability of the intervention. Longer-term monitoring could provide more insights into the continuous effectiveness of the hourly rounding protocol and its impact on fall prevention over an extended period. In addition, staff members' reluctance to embrace change could hinder education and the introduction of hourly rounds, leading to nonadherence and compliance with the new protocol.

Moreover, the project's reliance on self-reported data and compliance surveys from staff members could introduce potential biases and inaccuracies in assessing the intervention's effectiveness. Staff members might overreport or underreport their adherence to the hourly rounding protocol, leading to inaccurate conclusions regarding the intervention's actual implementation and impact.

Finally, external factors such as changes in patient acuity, staff turnover, or unanticipated policy shifts within the SNF could potentially influence the project's outcomes and hinder the accurate assessment of the intervention's impact on fall prevention. Acknowledging and addressing these limitations is crucial for ensuring a comprehensive understanding of the project's outcomes and implications for future fall prevention initiatives in SNFs.

Delimitations

The project's scope is confined to a single SNF, limiting the generalizability of the findings to other healthcare settings. The unique characteristics and resources of the specific facility might not reflect the challenges and capabilities of different SNFs, thereby potentially restricting the applicability of the project's outcomes on a broader scale.

Furthermore, the project's focus on implementing hourly rounding as the sole fall prevention strategy might overlook the potential benefits of a multifaceted approach to fall prevention, which could include environmental modifications, patient education, and interdisciplinary collaboration. This narrow focus could limit the project's ability to address the complex and multifactorial nature of falls in the elderly population.

Change

This project aims to change the SNF and augment the current system to improve patient safety and reduce falls. Quality improvement changes must be made to the minor to the highest level of the organization to make them effective. Implementing staff education and hourly rounding to avoid falls will also improve outcomes and patient satisfaction with their care. A healthcare facility can be hailed as an industry standard by effectively decreasing fall rates and leading to a positive financial impact in savings.

Change Framework

Hourly rounding will be implemented at the SNF as part of the QI project to decrease the number of falls and improve patient outcomes. The Three Stages of Change, developed by Kurt Lewin in 1951, will be adopted as the theoretical basis to help direct the execution of this QI project. Lewin created this model to promote changes at the organizational level. Three steps make up the model: (1) unfreeze, (2) change, and (3) refreeze (Hussain et al., 2018).

Letting go of an ingrained practice, behavior, or pattern is known as unfreezing and is the first stage (Lewin, 1951). According to Lewin (1951), instability can arise and disrupt the current environment, allowing for the identification of the driving and restraining factors. In the first stage, or unfreezing stage, the goal is to increase awareness among nurses and CNAs about the issue, share information on the frequency of falls and their impact, and emphasize the importance

of preventing falls to improve patient outcomes through education sessions. It's also crucial to recognize the obstacles that hinder progress, such as resistance from staff, limited resources, or outdated policies. The next step involves initiating the change by conducting training sessions for the staff, establishing hourly rounding protocols and guidelines for preventing falls, and implementing the practice change. It is crucial to offer assistance and motivation to the staff throughout this period since change can often pose challenges (Hussain et al., 2018). In the last or refreezing stage, hourly rounding will be incorporated into the organization's culture and policy. This will include keeping track of the incidence of falls, ongoing staff training, acknowledging staff efforts, and rewarding accomplishments. Skilled nursing facilities can develop a fall prevention culture and lower the number of falls among older adults by instituting hourly rounds and applying Lewin's behavior change theory to achieve and sustain the change (Kuhn, 1951).

Theoretical Framework

Improving the quality and safety of healthcare is a global challenge. Many healthcare improvement initiatives use Quality Improvement methods such as PDSA cycles to test changes and achieve better outcomes. The PDSA method is prevalent in healthcare improvement. It offers a framework for repeated trials of modifications to enhance the quality of systems. The PDSA cycle consists of four iterative stages, allowing continuous learning and improvement.

The first stage, Plan, involves recognizing the project's main goals, developing a detailed action plan, and outlining the expected outcomes. In this project, the planning phase would encompass specific strategies and interventions to educate staff on the importance of scheduled rounding and its impact on fall prevention. Identify key stakeholders and establish a timeline for implementation, ensuring adequate resources and support are available. Finally, develop

measurable criteria to evaluate the effectiveness of the education program such as posttest, laying the groundwork for subsequent PDSA cycles.

Do is the second phase, which comprises executing the plan as a pilot. During this phase, staff member's knowledge of the scheduled rounding protocol will be assessed with a pre-test, followed by staff education on scheduled hourly rounding and the implementation of hourly rounding. Post-test questionnaires will evaluate and compare the effect of education on staff knowledge. Any challenges or issues during the implementation will be noted and addressed accordingly.

In the third stage, the Study phase, data gathered through pre-and post-tests will be examined, and pre-intervention fall rate data will be analyzed. This examination aims to evaluate how well staff education improved understanding of scheduled rounding protocol and its impact on preventing falls among patients in skilled nursing facilities. In this phase, the data obtained during the implementation phase is analyzed thoroughly to find any improvement. It also involves staff surveys to evaluate staff acceptance of scheduled rounding protocol.

The fourth stage, Act, involves making necessary adjustments or improvements based on the findings from the study phase. If the data analysis indicates that the staff education has successfully reduced falls, the next step would be to scale the intervention to other units or areas within the skilled nursing facility. If any challenges or issues were identified during the study phase, appropriate modifications would be made to the education and training on the scheduled rounding protocol. This Act could include additional training for staff members, changes to the rounding schedule, or implementation strategies to enhance patient safety. Permission will be obtained from the facility to disseminate the project upon successful completion.

The PDSA cycle provides a structured and iterative approach for continuous learning, adaptation, and improvement. By following this framework, the skilled nursing facility can systematically implement and assess the effectiveness of the staff education on scheduled hourly rounding intervention, ultimately leading to improved patient outcomes and a safer healthcare environment for elderly residents.

Summary

This quality improvement project aims to prevent falls among older adults in an SNF by educating staff on scheduled hourly rounding and implementation of hourly rounding. The background of this problem has been discussed, citing the relevant data showing the high prevalence of fall rates among this population of adults. Several works of literature that have examined staff education and scheduled rounding as an evidence-based practice to reduce falls have also been comprehensively evaluated, and their findings have been discussed. After stating the problem, the project's purpose has been aligned to show the path for the solution needed. Lastly, the change, change framework, scope, and limitations of the project have also been discussed, and the section ends with the theoretical frameworks that will be used to implement this change in practice.

SECTION II: METHODS

Introduction

Falls among older individuals residing in SNFs present a significant challenge, often resulting in minor injuries, reduced quality of life, and even major injuries requiring transfers to acute care facilities and increased length of stay (Morris et al., 2022). An in-depth evaluation of the increased fall rates at the nursing facility's situation highlighted a practice gap related to fall prevention strategies. An in-depth analysis of the practice gap revealed the lack of

a standardized and consistent rounding protocol and insufficient staff knowledge contributing to the higher rate of falls, resulting in acute care transfer, increased length of stay, and associated healthcare costs (Albasha et al., 2023). The DNP Quality Improvement project evaluates the impact of staff education and hourly rounding to decrease the incidence of falls among adults aged 65 and older in the SNF compared to the current protocol over four weeks.

The project design will follow an approach that includes assessments, staff training, and follow-up evaluations. Before the intervention, staff members will receive a pre-test to assess their knowledge of rounding protocols and fall prevention strategies, and the fall rate at the facility will be evaluated. The sample group will include RNs, LPNs, and CNAs with varying levels of experience in resident care. Following the assessment using pre-test questions, educational sessions will be conducted for the staff, followed by a post-test assessment to assess knowledge gain. The data collection will include both pre-and post-test scores and fall rates at the facility before and after the implementation of hourly rounds. Statistical approaches, such as paired t-tests, will be used to compare scores and evaluate the importance of detected variances.

Project Design

The proposed QI project for educating staff and implementing scheduled hourly rounding by AHRQ aims to enhance staff knowledge of scheduled rounding and adherence to decrease the incidence of falls among residents in SNF (*Tool 3b: Scheduled Rounding Protocol*, 2013). This project is a quasi-experimental design using a pre-and post-intervention setup. This design enables the evaluation of knowledge enhancement via pre-and post-test assessments, appraising fall rates, and gauging the effectiveness of staff education and the hourly rounding program. The main goal is to enhance staff knowledge of scheduled rounding protocol and fall prevention, ultimately reducing fall rates among residents. IRB approval was obtained from the Arkansas

State Institutional Review Board, and a site permission letter was obtained from the DON at the SNF before the project implementation (see Appendix D).

Change management serves as the cornerstone of growth. The project integrates Lewin's change theory to achieve the desired outcomes. This process entails educating staff on the significance of purposefully scheduled rounding to prepare them for changes. It involves training employees on scheduled rounding procedures and emphasizing compliance with scheduled rounding protocols, leading to a decrease in falls within nursing facilities. The QI project is implemented using the PDSA model (*Plan-do-study-act (PDSA) Directions and Examples*, 2024). This model offers an approach for testing and refining interventions iteratively, aligning well with enhancing staff education and performing scheduled rounding (see Figure 1). The steps for the PDSA implementation are given below.

Plan

The planning stage is the essence of a QI project, as it establishes a systematic approach to testing changes, collecting data, and iterating improvements to ensure effectiveness and sustainability. In the planning stages of the QI project, I conducted a needs assessment to identify the gaps in evidence-based practice, focusing on the high incidence of patient falls at the SNF. After obtaining permission from DON, I collaborated with the team members to set clear goals to decrease the incidence of falls by 50%, which aligned with the facility's priorities. A comprehensive plan for staff knowledge assessment, education, and scheduled hourly rounding was developed, along with a data collection strategy to monitor the effectiveness of the interventions.

The goals of the educational intervention were determined, and baseline staff knowledge and fall rate data at the facility were established with an emphasis on improving staff awareness

of fall prevention and scheduled rounding. An intensive education plan was developed with required educational materials, and a structured protocol for hourly rounding was created. Establishing the pre-and post-test evaluation instruments and analyzing fall rate data at the facility is the cornerstone for authentication of knowledge enhancement.

Do

The second stage of the PDSA involves implementing the planned changes on a small scale to gather data and observe outcomes. Before the educational sessions began, the staff underwent a pre-test (see Appendix A) to gauge their knowledge levels using a fall knowledge test from AHRQ. The education sessions were carried out methodically to ensure all staff received training and resources. These activities were conducted during the daily morning huddles in the conference room from Monday to Friday, allowing both day and night shift staff to participate. The DON administered the pre-test and educational sessions led by the PI. Staff actively participated in these sessions, creating a learning environment that promoted knowledge retention (Leverenz & Lape, 2018). This process continued throughout the week to ensure maximum staff participation. Following the completion of the education sessions, a post-test evaluation was conducted by the DON to evaluate the effectiveness of the training.

In the second week, scheduled hourly rounding started, which involved RNs, LPNs, and CNAs. The rounds occurred throughout the day, with every hour rounding between 6 a.m. and 10 p.m., with scheduled visits every two hours from 10 p.m. to 6 a.m. to encourage rest and sleep for the residents. During these rounding sessions, nurses and nursing assistants alternated. The rounds were overseen by the facility's DON and ADONs to ensure adherence to the rounding procedure. Educational sessions will be continued for the staff as needed.

Study

During the study phase, the gathered information is carefully examined to determine how the education sessions have improved the staff knowledge of fall prevention and the impact of hourly rounding on decreasing falls. Post-test questionnaires (see Appendix A) governed the effectiveness of staff education and knowledge attainment upon completion of educational sessions. Data collection will also include weekly fall rates three weeks before and three weeks after implementation to monitor changes and improvements resulting from staff education and scheduled rounding.

Act

The collected data and staff feedback will be analyzed to evaluate the effectiveness of the intervention and its impact on falling rates. The analysis will be conducted on the pre- and post-test assessments. Based on staff input and observed outcomes, adjustments will be made to educational materials and session delivery methods. Furthermore, updates will be made to the rounding protocol based on observation and staff feedback to improve efficacy in fall prevention. The PDSA cycle works well for educating staff on the scheduled rounding protocol and scheduled rounding for fall prevention in nursing facilities. Its cyclic approach enables systematic evaluation and refinement of fall prevention interventions that align with the SNF's dynamic healthcare environment. Educational sessions established on evidence-based guidelines will equip the staff with the required knowledge and skills for effective hourly rounding and decrease fall rates among the residents.

Sample and Setting

The QI project is conducted in the SNF to educate clinical staff on the scheduled rounding protocol and improve staff knowledge of the scheduled rounding protocol from AHRQ. The SNF has a 90-bed capacity for skilled nursing residents that provides comprehensive care to

a population predominantly composed of older adults over 60. These residents often present with complex medical conditions, making them particularly susceptible to falls. Hourly rounding will be initially performed in two hallways in the facility, which includes a 30-bed capacity. The site permission letter was obtained from the facility's DON. There is an associated out-of-pocket cost of 400 dollars for printing educational materials and refreshments for training sessions.

The intervention population includes CNAs, LPNs, and RNs working in the facility at the time of project implementation. Exclusion criteria are those that did not receive the training. The exclusion criteria will ensure that every staff member involved has completed the training sessions and understood the protocols and requirements associated with the quality improvement project. The clinical staff enrolled in the intervention group will include 3 RNs, 9 LPNS, and 8 CNAs who worked 12-hour day or night shifts in the facility.

The recruitment strategy for the QI project is detailed and focused on involving all eligible staff members' participation and engagement. The pre-and post-tests will be administered, and education sessions will be conducted in daily huddles and communicated internally through emails, newsletters, and bulletin board notices. The leadership group, which includes the DON and ADONs, will support the project and motivate staff participation by highlighting its importance and offering guidance and assistance as needed. Their direct engagement is essential for promoting an outlook on the project and guaranteeing participation and compliance with the hourly rounding procedures. The project aims to fully engage all eligible staff through the recruitment plan, thereby enhancing the efficiency and longevity of the fall prevention program.

The role of Stakeholders is crucial for rolling out staff education and hourly rounding to reduce falls in an SNF and improve patient safety. The facility's leadership plays an important

role by supporting the program, providing resources, and promoting an environment for continuous improvement. The frontline clinical staff, which includes RNs, LPNs, and CNAs, is crucial to the successful execution of the QI project.

The SNF operates within the meso-level of healthcare, acting as a link between individual patient care and the broader healthcare organization (Sawatzky et al., 2021). In the QI project, the microsystem focuses on the frontline clinical staff, particularly RNs, LPNs, and CNAs. These staff members contribute to driving change by implementing scheduled rounding protocols and utilizing fall prevention strategies learned during training sessions. Their daily interactions with residents are critical to the program's success because they provide care that effectively prevents falls.

The mesosystem consists of middle management staff, such as unit managers and charge nurses, who manage the facility's day-to-day functions. They are responsible for ensuring adherence to protocols and offering assistance and direction to frontline employees. Their pivotal responsibilities include overseeing compliance, tackling implementation obstacles, and fostering communication between the micro and macro systems (Sawatzky et al., 2021).

Intervention populations at the macro level include the leadership team, improvements in overall care quality measures, and the facility's reputation within the healthcare organization. A decrease in fall-related incidents leads to lower healthcare expenses and reduces potential legal risks, ultimately strengthening the facility's standing. The facility's success in implementing a fall prevention program also positions it as a champion in ensuring safety and drawing in residents and skilled professionals. Furthermore, it fosters a culture that prioritizes excellence and ongoing improvement, highlighting the facility's commitment to providing secure care at the macro level.

Instrumentation

The two main tools to assess the intervention's efficacy are data on pre-and post-test results after staff education and fall rates before and after hourly rounding implementation. These instruments aim to evaluate the long-term effectiveness of the hourly rounding technique in preventing falls, along with its immediate educational impact on the staff. The fall knowledge test from AHRQ (see Appendix A) is the staff knowledge assessment tool for pre-and post-test evaluation. The tests aim to assess the nursing staff's knowledge of fall prevention before and after the education sessions. The pre-test is administered before the sessions, and the post-test is done after the educational sessions. The questionnaires include multiple-choice questions that cover key aspects of fall prevention strategies and the importance of hourly rounding. The AHRQ questionnaire utilized before and after education is valid and reliable for knowledge assessment. Written permission has been obtained from AHRQ to use the fall prevention knowledge as a pre and post-test for the QI project. Cronbach's alpha will be used to determine the internal consistency of the test items and to ensure the reliability of the questionnaire (Barbera et al., 2020). Ensuring high reliability is crucial, as it indicates the test's accuracy and consistency in measuring fall prevention knowledge, leading to more valid and dependable results.

Fall rate data will be collected from the facility's incident reports before and after staff education and hourly rounding. The collected fall rate data before and after project implementation will be compared to evaluate the project outcome. The data on fall rates is reliable because they reflect incidents documented by the facility staff over time. The data collection process will adhere to reporting procedures specified by the facility's incident management system to maintain accuracy. The pre-and post-tests were suitable for assessing the impact as they directly measured the knowledge acquired during training sessions. Comparing

fall rates provides an unbiased evaluation of how effective the intervention was in reducing fall incidents. Together, these tools enable an assessment of both educational results and long-term clinical outcomes related to the fall prevention initiative. Using these trusted and proven tools, the project seeks to gather evidence regarding how educating staff and conducting scheduled rounds can help prevent falls among residents in SNF. This effort ultimately aims to improve patient safety and the quality of care within the SNF.

Data Collection

The QI project on fall prevention involves a data collection approach with a focus on staff education and hourly rounding. The DON at the facility will collect data, including patient fall rates three weeks before and after implementation and pre and post-test data for the staff. These sampling units are considered non-human and fall under the purview of a quality improvement project, eliminating the need for consent (Kwok et al., 2022).

The data includes test scores before and after staff training sessions and reports on falls from the facility's incident management system. Data collection on staff knowledge occurs before and after the educational sessions. The fall incident data collection period is three weeks before and three weeks after introducing the rounding protocol. The SNF will use printed questionnaires for pre and post-test data collection. The DON will ensure data anonymization using personal identifier codes for the staff. The administrator at the facility approved data collection. All collected data will be securely stored in locked file cabinets in a locked room. Appendix E includes a letter of Institutional Review Board (IRB) approval.

Data Analysis Methods

The data on staff knowledge and fall prevention will be analyzed using the Intellectus statistical software upon completion of data collection three weeks after the project

implementation. Pre- and post-test scores collected in paper format before and after educational sessions will be transferred into table forms for descriptive analysis. This data will be used to analyze the impact of staff knowledge on decreasing falls among residents at the skilled nursing facility. Fall rate data will also be collected three weeks before and after the hourly rounds.

Pre- and post-tests are conducted using the same questionnaire before and after educational sessions. Each test question carried an equal point value. Descriptive statistics with the paired t-test will be employed to examine pre-and post-test results to determine staff knowledge enhancement ("Writing the Data-Analysis Plans for Advanced Clinical Projects," 2021). The most appropriate statistical method for this analysis is a paired t-test for related samples. The same employees' pre- and post-educational session scores will be compared to identify knowledge enhancement. After completing the paper test, the PI will enter all the pretest and post-test score data into table format. Data tables and graphs will be created in an Excel worksheet to report numbers and visually represent outcomes. The number of falls three weeks before and after the implementation and the unit census during the same period will also be used to identify any decrease in falls after the hourly rounding sessions.

A codebook (see Table 1) with metadata is developed to assist in data analysis, detailing variables (Brad Linn, 2019). This guide contains details about each variable, such as its format, which includes name, level of measurement, variable name, value labels, and indications of any missing data. According to the codebook, the PI created a table for entering data to gather information on pre and post-test knowledge scores. Each row contains data from staff members and their pre-and post-test scores. The columns are organized with variables in this sequence, such as staff ID, role, and years of clinical experience.

All the variables are measured and numerically coded. The fall incidence will be considered a nominal variable. The Intellectus statistics software will be utilized to analyze staff knowledge improvement and fall rate improvement. The rate of fall incidents will be assessed following the implementation of hourly rounds for three weeks to allow for comparison before and after project implementation.

The dataset will be initially reviewed for any mistakes in data entry by using tables. Any values outside the expected range or that seem unusual will be cross-checked with the staff's paper questionnaire or knowledge test and corrected in the data set. The assessment included 13 multiple-choice questions; each correct response earned 1 point, and an incorrect answer received 0 points. The total score will be calculated by adding the points for each answer, resulting in a score ranging from zero to thirteen. All unanswered questions will be considered incorrect. Any increase in test scores on the post-test should indicate staff knowledge enhancement.

A total of 20 staff members, including three registered nurses, nine licensed nurses, and eight certified nursing assistants, participated in both the pre-and post-test assessments and the education sessions. Descriptive statistics will be used to analyze factors, including comparing test scores before and after the educational sessions. This project mainly focuses on assessing fall prevention knowledge through a test score evaluation. Furthermore, the rates of falls before and after the project implementation will also be evaluated.

Data Management Methods

The data collection and management of the QI project is carefully designed to safeguard data privacy, security, and accuracy throughout the process, from data collection to deletion (Kanza & Knight, 2022). The DON will conduct pre-and post-test assessments for the staff using

printed questionnaires. To protect privacy, each staff member will receive an identifier for using personal information to maintain confidentiality and safeguard participant anonymity. Each staff member's pre and post-test scores are coded with the same personal identifier code.

Once the tests are completed, the DON will de-identify the test results. The PI will manually transfer the data to an Excel table format. The PI will do the data entry on a password-protected computer, separate from personal computers, to boost data security. This device securely stores digital information, keeping it inaccessible to other sources. Strict security measures will be in place throughout the data handling process, including password protection and storage in a locked room. The password-protected computer will require user login access, restricting entry only to the PI and the DON.

The statistical analysis will include descriptive statistics and paired t-tests to assess staff knowledge enhancement before and after educational sessions. In addition, the fall rates three weeks before and three weeks after the implementation of hourly rounding will be ascertained upon completion of three weeks of rounding. Only the PI will enter the data on a password-protected device. The results will be safely stored on the device, guaranteeing data security until data destruction upon project completion.

The physical papers will be kept in a locked filing cabinet within a locked room. The DON will shred these papers using a cut shredder for destruction and to prevent any reconstruction attempts. All digital information will be removed from the device after the project concludes on August 7, 2024. A final report summarizing the project outcomes will be prepared, ensuring that all essential data is anonymized to protect confidentiality.

Ethical Considerations

The quality improvement initiative, focusing on educating staff about preventing falls and implementing scheduled rounds in a nursing facility, raised various ethical concerns to guarantee the project's responsible and ethical execution (Wu et al., 2019). While quality improvement projects are usually exempt from consent requirements as they are viewed as human subjects, measures were taken to uphold ethical standards by prioritizing privacy, confidentiality, and fairness. Staff de-identifiers protect personal information, and patient identifiers will not be used in incident reports when analyzing fall rates. This de-identification process prevents potential confidentiality breaches and upholds privacy standards.

There is little or no risk to the participants involved in this project. All the team members are well briefed on the project's goals, methods, and possible advantages. Even though participation is usually part of their job responsibilities, being open about what the project aims to achieve and how it operates fosters trust and collaboration. Including all staff members from the intervention unit ensured impartiality and promoted inclusivity and fairness across roles such as RNs, LPNs, and CNAs. The PI will keep team members and participants regularly updated on the project's progress and outcomes.

Timeline, Budget, Resources, and Sustainability

Timeline

The DNP project on fall prevention in a nursing facility established a detailed timeline (see Figure 2) to guide the Principal Investigator (PI) and stakeholders. The planning for the project started in January 2024 with a meeting with the stakeholders at the facility. A site permission letter was obtained from the facility, and a practice partner agreement was developed with the supervising physician. The project received Institutional Review Board (IRB) approval on April 20, 2024, allowing the PI to start the QI project. Educational and training materials were

prepared before the project's implementation to avoid unnecessary delays. Staff education sessions and pre-and post-tests were conducted from May 13 to May 17. Fall rate data was gathered three weeks before staff education and hourly rounding, from April 21 to May 11, and will be collected three weeks after the education and hourly rounding sessions, from May 19 to June 8. The project implementation began on May 13 after finalizing all steps with stakeholders and will be continued until August 7, 2024. Data collection will be completed by June 17, and the data analysis will occur. The results will be shared with stakeholders upon completion of data analysis. A PowerPoint presentation will be delivered to faculty and students to address any queries or concerns for an in-depth discussion of the project outcomes and findings.

Budget

The budget-cost analysis encompasses various expenses, including out-of-pocket, direct, and indirect costs. Out-of-pocket expenses include educational materials, printing costs, and refreshments for training sessions. Educational materials were printed on the personal printer for 50 dollars for the toner and cartridge. The DON printed the pre-and post-test questionnaires on the standard printer at the facility, and no separate cost was calculated. The PI used personal transportation and gas to get to the facility for \$100. For five days, the PI provided a light refreshment for the educational sessions for 250 dollars. Institutional costs encompass staff salaries for training, preparation, equipment, and supplies. Since the knowledge testing and educational sessions took place during daily huddle hours, there were no additional salary costs for the staff. The facility provided a laptop for the educational sessions held in the conference room at no additional cost. There are no other indirect costs associated with the project. Thus, the total project cost is estimated at \$400 (see Table 2). No unit budget was allocated for the project, so the cost was kept to a minimum since all expenses were the PI's responsibility.

Resources

The QI project to reduce falls in SNF requires a variety of resources. These included educational materials from the AHRQ, such as the fall knowledge test, the scheduled rounding protocol, and educational materials. The resources included a fully equipped conference room with training aids for educational sessions. Computers with software and password-protected, secure databases will be used for data storage and analysis. In addition, printed pre-and post-test questionnaires and evaluation sheets were necessary for assessments. The staff performed hourly rounding under the supervision of the DON and ADONs at the facility. Ongoing support from facility management and active involvement from all staff members, including RNs, LPNs, and CNAs, are crucial components of this project

Sustainability

The QI project's sustainability to reduce falls is promising, with knowledgeable staff and an effective hourly rounding protocol. The low cost of educating staff and implementing rounding makes this project financially viable, providing a cost-effective solution for the facility to decrease falls among the residents and improve safety. A decrease in falls and injuries will lead to reduced healthcare expenses and better patient outcomes. This creates a safe environment for residents, improves the facility's reputation, and contributes to cost savings, ensuring the long-term success of fall prevention efforts. The project will be continued and fall prevention strategies will be implemented in the entire facility in the next phase upon successful completion of the QI project.

Summary

The QI initiative project aims to reduce falls by educating staff and implementing hourly rounds involving a data analysis and management plan. Paired t-tests will compare staff

knowledge and fall rates before and after education. Lewin's change theory guides the project design, and the PDSA model is the implementation framework. The fall knowledge test is used as the validating tool for knowledge assessment and fall rate data will evaluate the impact of staff education and hourly rounding on decreasing falls. Data management strategies ensure privacy and security by storing de-identified data on password-protected devices. Ethical considerations focused on minimizing risks to participants. The section also addressed timelines, budgeting, available resources, and long-term sustainability to highlight its feasibility, cost-effectiveness, and lasting impact. This paves the way for presenting the results and discussing the findings in the next section.

SECTION III: RESULTS AND DISCUSSION OF FINDINGS

Introduction

Falls are a significant challenge for older adults in SNFs, often resulting in severe injuries, reduced quality of life, and higher healthcare expenses (CDC, 2023). The higher number of falls in SNF, attributed to inadequate staff knowledge, a lack of resident monitoring, and a lack of established fall prevention protocols (Albasha et al., 2023), motivated this project. These challenges highlighted the importance of evidence-based intervention to enhance safety and increase the quality of care in SNFs. This QI project focused on preventing falls among older adults in SNF by educating staff about fall prevention strategies and the scheduled rounding protocol from the AHRQ. As part of the project, pre-test and post-test assessments were conducted to evaluate staff knowledge of fall prevention. Following the completion of staff education sessions, the scheduled hourly rounding protocol was implemented.

The primary goal of the QI project is to enhance staff members' knowledge regarding fall prevention and scheduled hourly rounding and to establish an evidence-based protocol for

scheduled rounds to decrease incidents of falls among elderly residents in the SNF. The objective of implementing hourly rounding based on evidence-based strategies recommended by AHRQ was to consistently assess and meet residents' needs, thereby reducing the likelihood of falls. This section showcases the project's outcomes, demonstrating the implementation of these strategies and their influence on fall rates to illustrate how incorporating evidence-based best practices can significantly enhance patient outcomes in SNFs.

The study findings suggest that providing training to staff along with a structured rounding approach can effectively enhance staff knowledge and lower the number of falls in SNF. The staff education focuses primarily on the scheduled rounding protocol and fall prevention methods. Hourly rounding on residents ensures their safety, identifies environmental hazards, and promptly addresses their needs (Anu, 2021). The findings indicated a decrease in fall incidents, underscoring the importance of consistent monitoring and proactive care. The project's outcomes emphasize the benefits of integrating evidence-based practice recommended by AHRQ into the care of adults in the SNF to enhance patient safety and quality of care. By adopting these practices, nursing homes can establish an environment for residents, ultimately improving their well-being and reducing financial strain on healthcare systems.

Summary of Methods and Procedures

A structured approach guided the QI initiative to reduce falls among individuals in SNFs. This project evaluated the impact of educational interventions to improve staff knowledge and scheduled hourly rounding to lower resident falls within the pilot unit. The QI project involved RNs, LPNs, and CNAs working both day and night shifts in the designated units. The fall knowledge test, a validated tool from AHRQ, is the staff knowledge assessment tool for pre-and post-test evaluation. The project design consisted of staff knowledge assessment, education on

fall prevention, scheduled rounding protocols, and the implementation of hourly rounding upon completion of educational sessions.

The project employed a pre-test/post-test quantitative quasi-experimental design to assess the impact of an educational program on staff's comprehension of fall prevention. Descriptive statistics with the paired t-test were employed to examine pre-and post-test results to determine staff knowledge enhancement and fall rate data comparison. The most appropriate statistical method for this analysis is a paired t-test for related samples. The same employees' pre- and post-educational session scores were compared to identify knowledge enhancement. This technique evaluates the effectiveness of education by assessing knowledge levels before and after the training sessions. It assesses the effectiveness of education sessions, making it a suitable method for this project.

All data collected from the pretest and posttest scores were input from the paper test to Excel format and then transferred and analyzed using descriptive statistics. Pre- and post-test data comparison using descriptive statistics showed a 40% knowledge enhancement after educational sessions (see Table 3). The mean score on the pretest was 49.5%; the mean score was 69.5% for the post-test, with a mean difference of 40. The data analysis indicated that RNs significantly increased knowledge, followed by LPNs and CNAs. Higher knowledge enhancement was also identified among staff with more years in clinical practice. The average years in practice for the staff was 4.7 years. A paired sample t-test revealed statistically significant differences in scores after education. The p-value of < 0.0001 provides strong evidence against the null hypothesis and indicates a statistically significant improvement in staff knowledge after the educational sessions.

The scheduled rounding protocol was implemented after completing the pre-and post-test sessions and providing staff training on the scheduled rounding protocol and fall prevention. Fall rate data was collected three weeks before and after the staff education and implementation of the scheduled rounding from the facility incident reports. This data collection was intended to compare fall occurrences before and after the hourly rounding intervention. The pre-implementation phase served as a baseline, documenting the frequency of falls within the facility. After the implementation of hourly rounding, fall incidents were tracked with the same rigor, allowing for a direct comparison. The collected data was then examined to assess the effectiveness of staff education and hourly rounding.

Summary of Sample and Setting Characteristics

The QI project, focusing on staff education and hourly rounding to reduce falls, was carried out in an SNF with a 90-bed capacity. For the initial phase, two hallways with 15 beds each were chosen for the project. Most of the SNF population were adults aged 65 and older, and the data collection on fall rates did not include patients younger than 65.

The participants were employees working both day and night shifts. The sample group included 20 individuals: three RNs (15%), nine LPNs (45%), and eight CNAs (40%). The data was collected on the staff's years in clinical practice (see Table 7). No other demographic data was collected from the participants.

Major Findings

The QI project on preventing falls among residents in SNF showed notable improvements in staff education and hourly rounding. Using Lewin's Change Theory as a guide, the project successfully navigated the stages of preparing for change, making changes, and solidifying

behaviors among staff members. The PDSA model was used to carry out the project, enabling enhancements and adjustments to the process.

All data collected from the pretest and posttest scores were input from the paper test to Excel format and then transferred and analyzed using descriptive statistics. Pre- and post-test data comparison using descriptive statistics showed a 40% knowledge enhancement after educational sessions. The mean score on the pretest was 49.5%; the mean score was 69.5% for the post-test, with a mean difference of 40. The data analysis indicated that RNs significantly increased knowledge, followed by LPNs and CNAs. Higher knowledge enhancement was also identified among staff with more years in clinical practice. The average years in practice for the staff was 4.7 years. A paired sample t-test revealed statistically significant differences in scores after education (see Table 3). The p-value of < 0.0001 provides strong evidence against the null hypothesis and indicates a statistically significant improvement in staff knowledge after the educational sessions.

The three-week pre-implementation fall rate totaled seven falls, and the three weeks of post-implementation fall data totaled four falls, indicating a gross decrease of 42.9% (7/4) for the reviewed period (see Table 4). The pre-implementation fall rate for three weeks averaged 2.3, and the post-implementation fall rate average was 1.35, with a decrease in fall rate of 42.9%. Although the data shows a reduction in fall rates, the p-value of 0.225 indicates that the result is not statistically significant at the conventional alpha level of 0.05. The difference in fall rates is not statistically significant at the 95% confidence level. Data analysis on pre- and post-fall rate data included adults aged 65 and older in the facility. A statistician was consulted, and descriptive statistics were analyzed. These findings support existing research emphasizing the importance of staff training and regular proactive monitoring of residents through scheduled

hourly rounding to prevent falls. However, the three-week time frame posed a challenge in assessing the long-term impact on fall rates and the effectiveness of the project.

The theoretical framework offered a foundation for grasping and enacting change, and the project results highlighted the importance of utilizing Lewin's Change Theory and the PDSA model in healthcare settings. Strong leadership and staff engagement are facilitators, while communication and feedback tackle challenges such as resistance to change. These findings demonstrate that combining a theoretical framework with evidence-based practice can significantly improve safety and quality of care and reduce falls in skilled nursing facilities.

Implications for Nursing Practice

The project focusing on improving fall prevention for residents in an SNF significantly enhances nursing practices. With the dual approach of staff education and scheduled hourly rounding, the project has effectively lowered the number of falls, addressed a major safety issue in SNFs, and improved overall quality of care and patient outcomes. The project's educational component significantly improved staff knowledge of fall prevention and scheduled rounding protocols. This knowledge enhancement was particularly pronounced among staff with more years of practice, underscoring the value of experience in applying educational interventions. By increasing the competency of nursing staff, the project has paved the way for more informed and effective fall prevention practices. This suggests that nursing practice should incorporate ongoing education and training to equip all staff members with the latest knowledge and skills to prevent falls. The educational sessions should be part of the new hire orientation program and the annual competency training.

The SNF must implement scheduled hourly rounding based on evidence-based practices to enhance patient safety. Reducing fall rates by 42.9% demonstrates the significant impact of

consistent and proactive monitoring. The study suggests that following evidence-based protocols can promote a sense of responsibility and awareness among staff and improve patient satisfaction and well-being. Standardizing hourly rounding as a recommended approach for preventing falls in SNFs ensures timely monitoring and interventions to enhance the quality of care and patient outcomes, thus elevating the facility's reputation in the community.

The project's success heavily relied on the incredible leadership team. The DON and ADONs played a role in overseeing and supporting the staff in following the protocols diligently and promptly addressing any issues. This underscores the significance of leadership in advancing initiatives to improve quality. Fostering leadership abilities and nurturing a culture of support within an organization are essential for implementing and maintaining evidence-based practices. Nursing leaders should actively participate in guiding their teams through changes, emphasizing the importance of interventions and ensuring adherence to guidelines.

In conclusion, though promising, the short monitoring period highlights the requirement for long-term efforts and continuous improvement to sustain the impact. This emphasizes the importance of ongoing assessment and improvement of staff education, as well as scheduled hourly rounding. The quality improvement initiative focusing on fall prevention in nursing facilities has convincingly showcased how staff training and systematic rounding protocols greatly enhance patient safety. These results emphasize the need for education, evidence-based strategies, effective leadership, and continuous enhancement in nursing practices to ensure advancements in patient well-being.

Recommendations

The quality improvement initiative focused on preventing falls in a nursing facility showed remarkable improvements in patient safety and quality of care. By educating staff

members and introducing hourly rounds, there was a 40% increase in staff knowledge of fall prevention and a significant 42.9 % decrease in fall incidents among residents. Nevertheless, the brief monitoring duration limited the assessment of long-term effects. The project will be continued in the SNF, which includes 90 beds, and the long-term effects will be monitored.

Based on the study's results, it is essential to prioritize education and training for staff members to enhance their knowledge and skills in preventing falls. Incorporating education into the facility's annual training calendar at a broader level would be beneficial to ensure staff members are up to date with fall prevention techniques. The new hire orientation program will be updated to include current fall prevention strategies.

The positive outcomes from the scheduled hourly rounding in both hallways suggest the importance of implementing the approach throughout the entire facility. Extending this method to all 90 beds in the facility will establish and foster a safety-focused patient care environment. The brief observation period of three weeks, both before and after the changes, yielded information but restricted the assessment of long-term effects. Extending the monitoring and data collection periods for longer will provide insight into the measures' enduring influence. Consistently examining and studying data will allow for improvements and adjustments to fall prevention strategies.

Sharing these protocols with skilled nursing facilities can encourage the adoption of best practices and increase industry norms to prevent falls. Additionally, pushing for policy adjustments that require mandatory, consistent fall prevention training in all nursing facilities can help establish a standardized level of high-quality care throughout the healthcare industry.

Discussion

The project to prevent falls among residents at SNFs showed improved staff knowledge and decreased patient fall rates. The measures, such as providing staff education on fall prevention and implementing scheduled hourly rounding, led to a 40% boost in staff knowledge and a 42.5% drop in fall incidents. These results underscore the effectiveness of staff education and hourly rounding in promoting patient safety within SNFs.

The significant increase in staff knowledge highlights the importance of learning in upholding high-quality patient care. The notable decrease in fall incidents demonstrates the effectiveness of proactive and consistent patient monitoring through hourly rounds. This initiative showcases how integrating evidence-based methods into practices can enhance patient well-being and nursing care excellence. It also shows the crucial role of leadership in endorsing and upholding these methods for sustaining long-term achievements.

The system should include annual, ongoing fall prevention education for staff, including refresher courses. Implementing rounding procedures throughout the facility will guarantee uniform patient care and monitoring. Enhancing leadership and supervision is essential, with nursing leaders playing a role in ensuring protocol compliance and handling any issues that arise. Extending the fall prevention monitoring period to three months or longer would be beneficial in evaluating the project's long-term outcome.

The main strength of this project was the education provided to the staff, which greatly improved the staff's knowledge. Introducing an approach to patient monitoring through hourly rounds established a solid structure for proactive patient management, leading to a significant decrease in incidents of falls. The active participation of nursing leaders in overseeing and backing up the staff was another asset, ensuring compliance with procedures and fostering an

employee-friendly atmosphere. Furthermore, the project's pre-test and post-test enabled an evaluation of the impact of education.

Despite the positive outcomes, there were limitations to the project. With a short monitoring period of three weeks before and after the implementation, it became challenging to assess the long-term effects. It would be beneficial to have longer monitoring periods to understand better how interventions impact outcomes over time. Furthermore, the project focused solely on the facility's two hallways. While the initial results were promising, extending these interventions to cover the facility could yield reliable data and potentially lead to greater improvements in preventing falls. Another factor is that the project did not consider variables that could have influenced fall rates, such as differences in acuity or other ongoing interventions happening simultaneously.

Conclusions and Contributions to the Profession of Nursing

This project demonstrated that focused efforts, such as educating staff and following rounding procedures, can improve the nursing staff's knowledge and patient safety. The noticeable improvement in staff knowledge underscores the effectiveness of education in arming nurses with the skills to prevent falls. The considerable decrease in fall incidents indicates that monitoring residents consistently is vital for reducing fall risks. Even though the monitoring period was short, the project's positive results suggest that these interventions could yield long-term benefits if continued and expanded.

The results of this QI project contribute to the nursing field within SNFs. The project underscores the importance of education in preventing falls. Incorporating consistent evidence-based education sessions ensures that nursing staff stay current with the latest best practices. This enhances nurses' skills and raises the overall quality of care the facility provides. The success of

scheduled rounding protocols demonstrates the benefits of adopting and promoting them across SNFs, and the nursing profession can establish a more uniform and efficient approach to fall prevention.

Nursing leaders' participation greatly influenced the project's success, highlighting the role of leadership in advancing quality improvement efforts. Strong leadership is vital for promoting adherence to practices, swiftly addressing obstacles, and nurturing a conducive atmosphere for staff and patients. Establishing a safety culture within SNFs is imperative for sustaining fall prevention strategies. Encouraging employees to report near misses and potential risks without fear of consequences encourages a commitment to safety measures.

In summary, the QI project, which focuses on preventing falls, highlights the effectiveness of initiatives and proactive monitoring techniques in improving safety and quality of care within skilled nursing facilities. Implementing these insights into nursing protocols can reduce fall incidents and improve the quality of care for individuals. The project's impact on nursing emphasizes the importance of learning, consistent practices, strong leadership, and fostering a culture that prioritizes safety to achieve and maintain advancement.

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Tables

Table 1

Codebook

Variable Name	Format	Type/Label	Coding	Inapplicable Data
Participant ID	Alpha Numeric/ Nominal	RN- Registered Nurse LPN- Licensed Practical Nurse CNA- Certified Nursing Assistant	RN LPN CNA	NA
Role	Nominal	RN LPN CNA	RN1-3 LPN1-9 CNA1-8	NA
Years in Practice	Numeric	0-1 2-4 5-7 7-9 10 or greater	1 2 3 4 5	NA
Pre- Test Score	Interval/Ratio	0-100	NA	NA
Post-Test Score	Interval/Ratio	0-100	NA	NA
Pre-Implementation Fall Rates	Nominal	Pre-implementation Fall rate	NA	NA
Post-Implementation Fall Rates	Nominal	Post-Implementation Fall Rate	NA	NA

Table 2

Budget

ITEM	COST
Direct Cost	
Printing Cost for training materials	50
Printing cost for Test	Facility provided materials
Gasoline	Personal 100
Salaries	Institutional cost
Indirect Cost	
Conference room	Facility conference room
Refreshments	250
Computer/Software	Facility provided computer
Total	400

Table 3

Mean Fall Prevention Knowledge

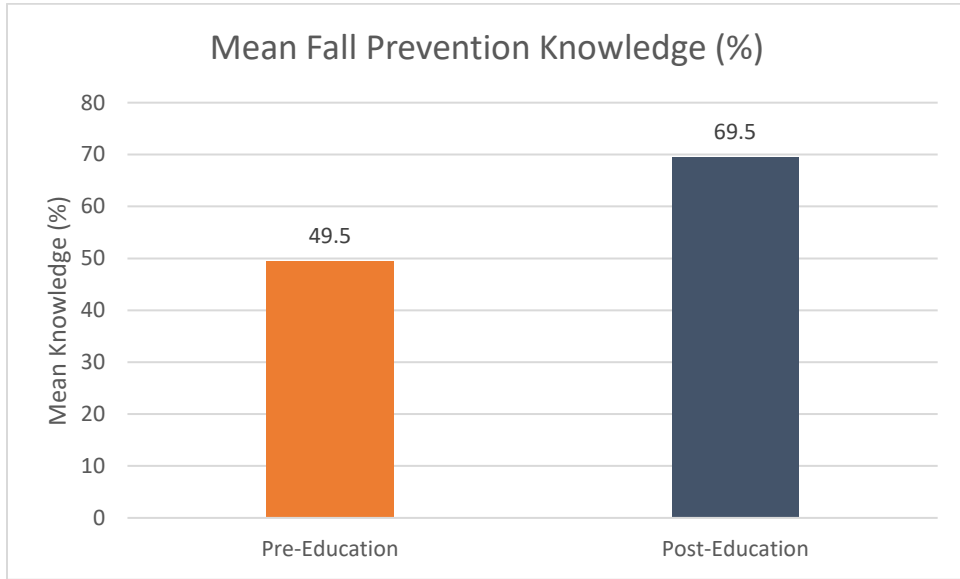


Table 4

Fall Rates Pre- and Post-Education

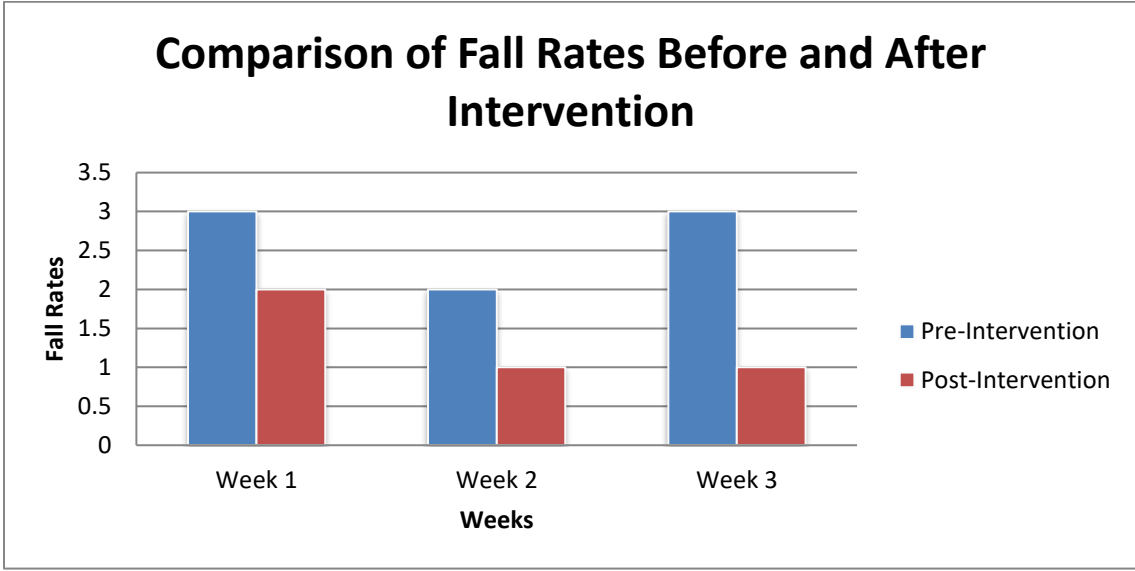


Table 5

Paired t-test fall prevention knowledge

Paired t: pre, post				
Descriptive Statistics				
Sample	N	Mean	St Deviation	SE mean
Pre	20	49.9	3.9	0.872
Post	20	69.5	1.6	0.358
Estimation of paired differences				
Mean	St deviation	SE Mean	95% CI	
19.6	4.21	0.94	(17.63, 21.57)	
T- value	P- value			
5.96	< 0.0001			

Table 6

Paired t-test fall rate

Paired t: pre, post				
Descriptive Statistics				
Sample	N	Mean	St Deviation	SE mean
Pre	30	2.3	0.577	0.333
Post	30	1.3	0.577	0.333
Estimation of paired differences				
<u>Mean</u>	<u>St deviation</u>	<u>SE Mean</u>	<u>95%CI</u>	
1.00	1.00	0.577	(-0.18, 2.18)	
<u>T- value</u>	<u>P- value</u>			
1.732	0.225			

Table 7

Demographic Characteristics of Sample

Characteristic	<i>n (%)</i> (<i>N=20</i>)
Role	
RN	3 (15%)
LPN	9 (45%)
CNA	8 (40%)
Years of Practice in the Field	
0-1 year	4 (20%)
2-4 years	5 (25%)
5-7 years	5 (25%)
10 or more years	6 (30%)

Figures

Figure 1

PDSA Cycle

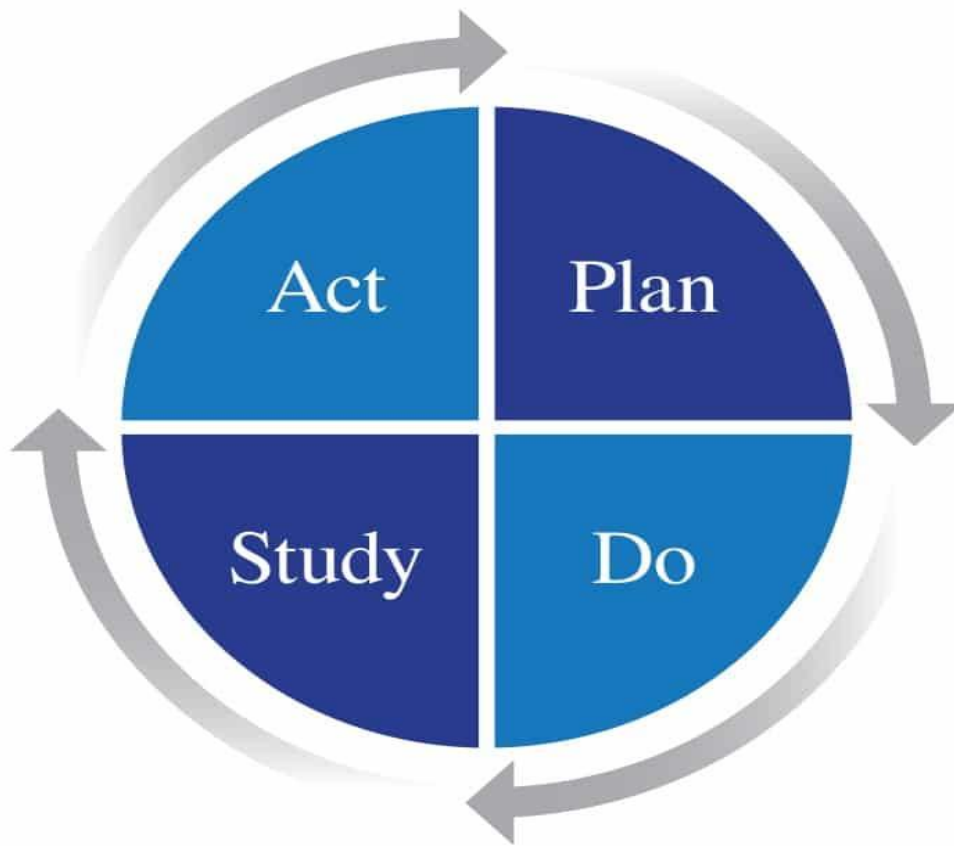
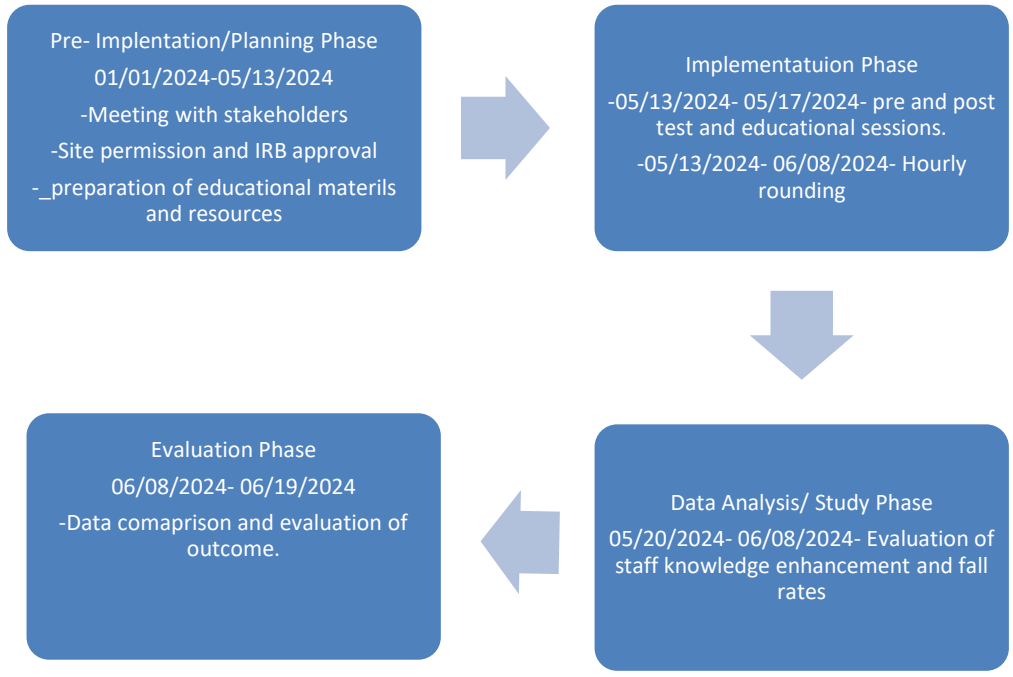


Figure 2

Timeline



Appendix A

Appendix A

2E: Fall Knowledge Test

Fall Knowledge Test

Each question may have more than one option as the correct answer.

Please circle the letters that correspond to the correct answers.

1. Which of the following statements is correct?
 - a. Falls have multifactorial etiology, so fall prevention programs should comprise multifaceted interventions.
 - b. Regular review of medication can help to prevent patient falls.
 - c. The risk of falling will be lessened when a patient's toileting needs are met.
 - d. The use of antipsychotic medications is associated with an increased risk of falls in older adults.
2. A multifaceted intervention program should include:
 - a. Individually tailored fall prevention strategies
 - b. Education to patient/family and health care workers
 - c. Environmental safety
 - d. Safe patient handling
3. Risk factors for falls in the acute hospital include all of the following except:
 - a. Dizziness/vertigo
 - b. Previous fall history
 - c. Antibiotic usage

- d. Impaired mobility from stroke disease
4. Which of the following statements is true?
- a. The cause of a fall is often an interaction between patient's risk, the environment, and patient risk behavior.
 - b. Increase in hazardous environments increases the risk of falls.
 - c. The use of a patient identifier (e.g., identification bracelet) helps to highlight to staff those patients at risk for falls.
 - d. A fall risk assessment should include review of history of falls, mobility problems, medications, mental status, continence, and other patient risks.
5. Patients with impaired mobility should be:
- a. Confined to bed
 - b. Encouraged to mobilize with assistance
 - c. Assisted with transfers
 - d. Referred for exercise program or prescription of walking aids as appropriate
6. The management of the acutely confused patient should include all of the following except:
- a. Moving patients away from the nursing station
 - b. Involving family members to sit with the patient
 - c. Orienting patients to the hospital environment
 - d. Reinforcing activity limits to patients and their families
7. Which of the following statements is false?
- a. Fall prevention efforts are solely the nurses' responsibility.

- b. A patient who is taking four or more oral medications is at risk for falling.
 - c. A patient who is taking psychotropic medication is at higher risk for falling.
 - d. Testing or treatment for osteoporosis should be considered in patients who are at high risk for falls and fractures.
8. In hospital settings, intervention programs should include:
- a. Staff education on fall precautions
 - b. Provision and maintenance of mobility aids
 - c. Post fall analysis and problem-solving strategy
 - d. Bed alarms for all patients, regardless of risk
9. When assessing patients, which of the following statements is false?
- a. All patients should be assessed for fall risk factors at admission, at a change in status, after a fall, and at regular intervals.
 - b. Medication review should be included in the assessment.
 - c. All patients should have their activities of daily living and mobility assessed.
 - d. Environmental assessment is not important in the hospital as it is all standardized.
10. Risk factors for falls include:
- a. Parkinson's disease
 - b. Incontinence
 - c. Previous history of falls
 - d. Delirium
11. Exercise programs for ambulatory older adults should:
- a. Be very aggressive
 - b. Be unsupervised

- c. Be ongoing
- d. Include individualized strength and balance training

12. Which of the following statements on education in fall prevention is false?

- a. Education programs should target primarily health care providers, patients, and caregivers.
- b. Education programs for staff should include the importance of fall prevention, risk factors for falls, strategies to reduce falls, and transfer techniques.
- c. Instruction on safe mobility, with emphasis on high-risk patients, should be provided to both patients and families.
- d. Education should only be given at the start of the fall prevention program.

13. Which of the following is recommended to improve patient safety?

- a. Locking wheeled furniture when it is stationary.
- b. Having nonslip flooring.
- c. Placing frequently used items (including call bell, telephone, and remote control) within reach of the patient
- d. Rounding hourly to address patient needs

Answer Key:

- 1. A, B, C, D
- 2. A, B, C, D
- 3. C
- 4. A, B, C, D
- 5. B, C, D

6. A
7. A
8. A, B, C
9. D
10. A, B, C, D
11. C, D
12. D
13. A, B, C, D

Appendix B

3B: Scheduled Rounding Protocol

The following items should be checked and performed for each patient. Upon entering the room, tell the patient you are there to do your rounds.

-
- 1 Assess patient pain levels using a pain-assessment scale (if staff other than RNs are doing the rounding and the patient is in pain, contact an RN immediately so the patient does not have to use the call light for pain medication).

 - 2 Put medication as needed on RN's scheduled list of things to do for patients and offer the dose when due.
 - 3 Offer toileting assistance.
 - 4 Check that patient is using correct footwear (e.g., specific shoes/slippers, nonskid socks).*
 - 5 Check that the bed is in locked position.*
 - 6 Place hospital bed in low position when patient is resting; ask if patient needs to be repositioned and is comfortable.*
 - 7 Make sure the call light/call bell button is within the patient's reach and patient can demonstrate use.*
 - 8 Put the telephone within the patient's reach.
 - 9 Put the TV remote control and bed light switch within the patient's reach.
 - 10 Put the bedside table next to the bed or across bed.*
 - 11 Put the tissue box and water within the patient's reach.
 - 12 Put the garbage can next to the bed.
 - 13 Prior to leaving the room, ask, "Is there anything I can do for you before I leave? I have time while I am here in the room."
 - 14 Tell the patient that a member of the nursing staff (use names on white board) will be back in the room in an hour to round again.
-

Appendix C

Institutional Review Board Approval Letter

4/24/24, 9:07 PM

Arkansas State University Mail - FY23-24-289 - Initial: IRB Not Research/Not Human Subject Research



Reshmi Abraham <reshmi.abraham@smail.astate.edu>

FY23-24-289 - Initial: IRB Not Research/Not Human Subject Research

3 messages

do-not-reply@cayuse.com <do-not-reply@cayuse.com>

Wed, Apr 24, 2024 at 10:58 AM

To: asmart@astate.edu, ldrake@astate.edu, reshmi.abraham@smail.astate.edu

**RESEARCH AND TECHNOLOGY TRANSFER**

P.O. Box 2760, State University, AR 72467 | o: 870-972-2694 | f: 870-972-2336

April 24, 2024

Principal Investigator: Reshmi Abraham

Board: IRB (Institutional Review Board)

Study: FY23-24-289 Fall Prevention Among Older Adults in SNF Through Staff Education and Implementation of Hourly Rounding

Submission Type: Initial

Board Decision: No Engagement in Research

Approval Date: April 24, 2024

Thank you for your submission of New Project materials for this research study. The Arkansas State University Institutional Review Board has determined the proposed activity does not meet the definition of "research" involving "human subjects" as defined by the U.S. Department of Health and Human Services Office for Human Research Protections regulations, codified at 45 CFR 46.102. Review and approval by the A-State IRB is not required. This determination applies only to the activities described in the submission noted above and does not apply to any changes to this project. You may proceed with your project. Please submit a new request to the IRB for a determination if any changes are made which lead to any questions about whether the activities are research involving human subjects.

Please retain a copy of this correspondence for your records. If you have any questions, please contact the Director of Research Compliance at (870) 972-2694 or IRB@astate.edu. Please include your study title and study label.

Sincerely,

Eric Cave, Ph.D.

Chair, Institutional Review Board

Appendix D

Site Permission Letter



Site Permission Letter

Date: 04/15/2024
 Arkansas State University – Jonesboro
 Institutional Review Board
 c/o Research and Technology Transfer
 Post Box 2760
 State University, Arkansas 72467

To Whom It May Concern:

A Doctor of Nursing Practice student in the Arkansas State University-Jonesboro Department of Nursing has requested permission to complete the Doctor of Nursing Practice project named below at Remington Transitional Care during the period of 04/01/2024 to 8/07/2024.

This letter notifies you that I/we grant permission to Reshmi Abraham, a student of Arkansas State University-Jonesboro Doctor of Nursing Program, to collect data at the location listed below.

Project Title: Decrease fall rates in skilled nursing facility through staff education and hourly rounding.

Principal Investigator: Reshmi Abraham

Study Site Location: Remington Transitional care, 1350 E Lookout Dr, Richardson, Tx 75082

Permission Granted by: Inbet Peters, DON

Inbet Peters
 Signature

4/15/24
 Date

Remington Transitional Care of Richardson
 1350 East Lookout Drive
 Richardson, TX 75082-4106

Appendix E

AHRQ Permission Letter

March 30, 2024

Reshmi Abraham
DNP student
Arkansas State University
Jonesboro, AR

Dear Reshmi Abraham:

I am responding to your permission requests on behalf of the Office of Communications at the United States Agency for Healthcare Research and Quality (AHRQ). This letter constitutes the signed permission from AHRQ on the Agency's letterhead that you requested.

This letter grants you permission to use materials from the AHRQ's *Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care*, as well as a module from the AHRQ course *Fall Prevention in Hospitals Training Program*, as part of your Quality Improvement Project for the DNP degree from Arkansas State University (Jonesboro, AR). Specifically, you have permission to use "Tool 2E. Fall Knowledge Test" and "Tool 3B. Scheduled Rounding Protocol" from the *Preventing Falls in Hospitals Toolkit*. You also have permission to use the Slide Presentation from "Module 1: Understanding Why Change is Needed" from the *Fall Prevention in Hospitals Training Program*, as well as the Instructor Training Guide.

This permission allows you to print multiple copies of relevant tools, module slides, and handouts, as needed. Copies of these materials can be included in your project paper in an Appendix. Please give appropriate source /reference citation for the two sources:

Preventing Falls in Hospitals: A Toolkit for Improving Quality of Care [Section 7. Tools and Resources]. (Content last reviewed February 2024). Agency for Healthcare Research and Quality; Rockville, MD. <https://www.ahrq.gov/patient-safety/settings/hospital/fall-prevention/toolkit/tools-resources.html>

"Module 1. Understanding Why Change is Needed." Fall Prevention in Hospitals Training Program. (Content last reviewed September 2018). Agency for Healthcare Research and Quality; Rockville, MD. <https://www.ahrq.gov/patient-safety/settings/hospital/fall-prevention/index.html>

The permission does not extend to subsequent publication of these materials in a professional journal or book chapter. Additional reprint rights from the AHRQ Office of Communications to the publisher would be required in this case.

Best wishes on the success of your project and your degree program.

Sincerely,

 David I. Lewin, M.Phil.
Health Communications Specialist/Manager of Copyrights & Permissions
Office of Communications
Agency for Healthcare Research and Quality
5600 Fishers Lane
Rockville, MD 20857 USA

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Phone: +1 301-427-1895