

The University of San Francisco

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

Master's Projects and Capstones

All Theses, Dissertations, Capstones and
Projects

Summer 8-11-2023

Fall Risk Identification and Reduction Among the Gerontological Population at a Long-term Care Facility

Esther A. Lowe

University of San Francisco, ealowe@dons.usfca.edu

Breanna Cates

University of San Francisco, bmcates@dons.usfca.edu

Lisa James

University of San Francisco, lmjames@dons.usfca.edu

Ashley Samson

University of San Francisco, agsamson@dons.usfca.edu

Jowel Ochoa

University of San Francisco, jechoa3@dons.usfca.edu

See next page for additional authors

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



Part of the [Geriatric Nursing Commons](#), and the [Public Health and Community Nursing Commons](#)

Recommended Citation

Lowe, Esther A.; Cates, Breanna; James, Lisa; Samson, Ashley; Ochoa, Jowel; and Ng, Matthew, "Fall Risk Identification and Reduction Among the Gerontological Population at a Long-term Care Facility" (2023).

Master's Projects and Capstones. 1605.

<https://repository.usfca.edu/capstone/1605>

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

Author

Esther A. Lowe, Breanna Cates, Lisa James, Ashley Samson, Jowel Ochoa, and Matthew Ng

**Fall Risk Identification and Reduction Among the Gerontological Population at a
Long-term Care Facility**

Breanna Cates, Ashley Samson, Lisa James, Esther Lowe, Jowel Ochoa, and Matthew Ng

NURS 653: Internship

Dr. Lauren Knapp

University of San Francisco

Summer 2023

TABLE OF CONTENTS

Section I: Title and Executive Summary	
Title	1
Abstract	4
Section II: Introduction	5
Problem Description	5
Literature review	6
Rationale	9
Specific Project Aim	10
Section III: Methods	10
Context	10
Microsystem Assessment	10
SWOT Analysis	12
Cost Benefit Analysis	13
Intervention	14
Study of Intervention	14
Measures	15
Section IV: Results	16
Barriers	16
Expected Outcome	17
Section V: Discussion	17
Summary	17

Conclusion	18
Section VI: References	19
Section VII: Appendices	21
Appendix A: Statement of Determination	21
Appendix B: IRB Non-research Determination Form	23
Appendix C: SWOT analysis	24
Appendix D: Fishbone Diagram	25
Appendix E: Gantt Chart	26
Appendix F: Annotated Bibliography	27
Appendix G: Budget/Cost-Benefit Analysis	33
Appendix H: Discreet Identifier	34
Appendix I: Staff Education Presentation	35
Appendix: J: Resident Education Presentation	37
Appendix K: Past Fall Database	41
Appendix L: Clinical Incident Report Form and Responses	42
Appendix M: Morse Fall Scale and Responses	43
Appendix N: QR Codes for Morse Fall Scale and Clinical Incident Report	44

Abstract

Problem: Data obtained from the facility from February 2022 to July 2023 showed that there were a total of 110 falls at the facility with 51% resulting in injury. The facility also lacked a standardized fall assessment tool with minimal follow up after fall incidents.

Context: A microsystem assessment of the geriatric population at the long-term care facility indicated the need for a standardized fall risk screening tool to accurately assess patients.

Interventions: A staff presentation was created highlighting the high rate of falls at the facility as well as to educate on the implementation of the Morse Fall Scale. Additionally, a presentation was created for residents to provide education on factors that increase the risk of falls and prevention measures to encourage active participation in their care.

Measures: Data from February 2022-July 2023 was obtained and organized in an electronic database created on a Google Sheet. To measure the outcome, the number of falls in January 2023 will be compared to data from January 2024 to determine if there has been a 20% decrease in resident falls.

Results: Due to time constraints, the results will not be obtained. The expected outcome of this project is to reduce the number of falls in the facility by 20% within six months and prevent future incidents, as evidence shows that fall assessment and interventions can reduce falls rates by 20-30% (Morris & O'Riordan, 2017).

Conclusion: Equipping the staff with a standardized electronic Morse Fall Scale assessment tool will improve the assessment of residents' fall risk. Education provided to residents will allow them to be active and mindful in their own care ultimately reducing the fall rate and achieving the best patient outcomes.

Section II: Introduction

Falls are the most common problem in the geriatric population, linked to significant morbidity and mortality (Albasha et al., 2023). Approximately 30 to 50% of people aged 65 and above experience a fall at least once annually, and 40% fall recurrently (WHO, n.d.). Long-term care facilities (LTCFs) have the highest rates of falls of any healthcare setting, with more than three times the rate of an estimated 1.7 falls per resident-year and ranging between three to thirteen falls per one thousand bed days (Albasha et al., 2023).

A fall is defined as a sudden, not intentional, and unexpected movement from an orthostatic position, seat to position, or from a clinical position (Strini et al., 2021). It is essential to address this problem in this population because older adults have a decrease in their functional status used to maintain the orthostatic position, which often leads to physical and psychological consequences (Strini et al., 2021). This project intends to identify and reduce the risk of falls in the gerontological population. Preventing the risk of falls can help improve patient outcomes and safety as well as reduce fall-related morbidity and mortality.

Problem Description

This paper will discuss a quality improvement project among a gerontologic population at a long-term care facility. This project intends to identify and reduce the risk of falls in the gerontological population. After a needs assessment meeting with the clinical director at the facility, it was established that the facility does not have a standardized process or screening tool for assessing the patient's fall risk. Patients are only considered a fall risk after falling; additionally, incident reports regarding the falls are only documented on paper forms by the nurse team leader and not filed electronically. This is an issue as there is no organization or

utilization of these paper forms. Once these incident forms are filled out, they are simply filed away with little or no additional action. As fall incidents grew, so did the stack of papers. This method is ineffective as there is no system to keep track of who had fallen, the number of times they had fallen or injuries sustained. Without consolidating this information in a database, the patient's fall information is solely based on memory or a time consuming search through the paper forms. Using the information gathered from fall incident reports provided by the facility, an electronic database was created organizing all the data. Data showed, from February 2022 to July 2023, that there were a total of 110 fall incidents at the facility with 51% of the falls resulting in injury.

To address this issue, the Morse Fall Scale, an evidence-based practice screening tool will be used to screen each patient at the facility to identify their individual fall risk. Implementing this screening tool will allow staff to assess those at risk for falls to prevent future incidents from happening. Identification of multiple underlying factors with a clear intervention and assessment such as the Morse Fall Tool has been shown to reduce the incidence of inpatient falls by 20-30% (Morris & O'Riordan, 2017). By assessing and intervening to reduce risk factors, future falls can be reduced and prevented. Education to both residents and staff regarding fall prevention measures will be provided. Additionally, staff will be educated on using the Morse Fall Scale to assess new patients and reassess current patients every three months to help improve patient outcomes and safety and reduce fall-related morbidity and mortality.

Literature Review

To conduct an accurate literature review and synthesize evidence to support the quality improvement project, the following PICOT question was asked: In the gerontologic population

at a long-term care facility (P), does the implementation of the Morse Fall Scale on admission and throughout the duration of resident's stay (I), compared to no standardized fall risk assessment (C), affect the incidence of falls (O)? The literature reviewed and evidence synthesized were obtained from the following databases; CINAHL, EBSCOhost, SCOPUS, Pubmed, and NIH. The following keywords: accidental falls, Morse falls tool, fall prevention, incidence, geriatric, elderly, assessment, long-term care, education, and systematic review were utilized to obtain valid evidence that supports the project. A total of ten articles were reviewed based on their applicability to the PICOT question. The articles consisted of seven (7) systematic reviews and meta-analyses, one (1) longitudinal cohort study, one (1) case-control study, and one (1) qualitative study.

Two systematic reviews with meta-analysis and a qualitative study emphasized the importance of implementing multiple fall risk assessments and brought to light the risk factors that contribute to falls among the elderly being multifactorial. The most common risk factors highlighted in the systematic reviews included advanced age, medications or polypharmacy, physiological changes, and their effect on mobility, sensory, neuromuscular, and psychological changes (Jehu et al., 2021; Strini et al., 2021; Reis Dasilva, 2023). In another study, Dykes et al. (2023), who conducted a case-control study that explored the cost of inpatient falls and the economic impact of implementing evidence-based fall prevention programs reported a decrease in the number of falls and injuries from 2503 and 900 respectively, to 2078 and 758 respectively. Additionally, a net cost of \$14,600 per 1000 patient days was avoided due to the implementation of the fall prevention program (Dykes et al., 2023).

Furthermore, Albasha et al. (2023) emphasized in their systematic review of the implementation strategies of fall prevention measures that the most common methods were staff training and education, as implementing these interventions were not critically considered, but the programs themselves were effective. To further support the aforementioned systematic review, Morris et al. (2022) also conducted a systematic review of 43 studies, of which 23 of those studies were included in a meta-analysis. It was reported that both staff and patient education were most effective at reducing fall occurrences followed by other multifactorial interventions including assistive devices, policies & systems, medication management, environmental modification, rehabilitation, and management of cognitive impairment (Morris et al., 2022). Three other systematic reviews and one longitudinal cohort study affirmed that multifactorial interventions, including mobility and exercises, education, environmental modification/management, low floor beds, routine assessments, and reduction in polypharmacy, contributed to a reduction in fall occurrences (Frith et al., 2019; Hopewell et al., 2020; Schoberer et al., 2022; Sherrington et al., 2020).

The wealth of evidence obtained after a review of the literature reveals the physical, psychological, and economic impact of fall occurrences and recurrences among the elderly population. Additionally, the literature emphasized the significance of multifactorial fall prevention strategies, including routine fall assessments, patient & staff education, home environment management, medication management, and regular exercises, all of which, when implemented together, will significantly reduce fall events, fall-related morbidity and mortality. Lastly, the literature reviewed supports the project's aim and contributes to the interventions.

Rationale

Lewin's Change Model was utilized to implement the intervention for the quality improvement project. This model has three phases: unfreezing, changing, and refreezing. The unfreezing stage focuses on convincing the staff of the need for change (Hussain et al., 2018). In this project, staff will be educated regarding the high rate of falls at the facility and the need to standardize documentation regarding resident falls, standardized fall risk assessments, and standardized fall precautions.

The changing stage focuses on demonstrating the benefits of changing (Hussain et al., 2018). In this project, a presentation was created to educate staff on using the new electronic incident report form, the Morse Fall Scale, and current best practices for fall risk precautions. A presentation was also created for the residents on factors that increase fall risk and prevention measures. Identifying residents at risk and providing education will increase patient safety and help reduce fall-related morbidity and mortality.

The refreezing stage focuses on maintaining the changes that have been implemented and integrating them into everyday practice (Hussain et al., 2018). For this project, in addition to educating current staff members, the presentation can be utilized as part of the onboarding requirements for new hires. To determine if the refreezing is effective, data from the new electronic incident report can be compared to the initial data gathered to determine if the number of falls at the facility has decreased. If compliance with the intervention implementations are successful and the number of falls decreases, celebrating this success will be part of refreezing to help encourage continued compliance and reduce resistance to further change.

Specific Project Aim

This project aims to improve fall risk identification and reduction in the gerontological population at a long-term care facility in Orange, California. The process begins with using the Morse Fall Scale to assess each facility resident to identify their fall risk, classifying them from low to high risk. The process ends with educating residents and staff about fall prevention measures and factors that increase fall risk. Additionally, staff members will be educated on using the Morse Fall Scale to assess new patients who arrive at the facility and reassess patients in the future. According to Morris & O’riordan, (2017), several systematic reviews reported that multifactorial interventions, including routine assessments and education, contributed to fall reduction in hospitals, especially among patients aged 65 years and above, by 20% - 30%. In light of the aforementioned data, by working on this process, the expected outcomes include reducing the number of falls in the facility by 20% within six months and preventing future incidents. It is essential to work on this now to improve safety measures and reduce morbidity and mortality related to falls at the facility.

Section III: Methods

Context

Microsystem Assessment

This is an 80-bed long-term care facility that opened in 1974. It provides a home and place of care to retired sisters in the community and currently houses approximately 54 residents. The sisters consider the facility their final convent, and it is treated more as a home where they receive personalized care.

A resident's fall risk is crucial to identify within the gerontological population in this facility. Identifying patients most susceptible to falls can improve patient outcomes and safety by decreasing fall-related morbidity and mortality. This ultimately reduces the cost of care for patients due to falls and promotes safe practices regarding fall prevention.

The gerontological population within the facility is identified as a fall risk due to the prevalence of falls and injuries relating to falls. With 51% of falls resulting in injury from February 2022 to July 2023, this population of patients is vulnerable to falls and the consequences that accompany them. In this population, almost all patients have comorbidities and take medication on the Beer's List. Both of these factors are considered in the assessment and education of this population.

The staff comprises nursing aides and caregivers to carry out day to day responsibilities. Leading the operations on the floor is a clinical director, clinical staff developer and a care coordinator. The facility is split into a north and south side as well as a first and second floor. On each side, there are 4 certified nursing assistants to assist the patients as well as 1 nurse team leader. Individuals on the second floor tend to be more independent and have lower acuity than those on the first floor. When residents on the second-floor experience 3 falls, they are reevaluated for a potential move to the first floor to ensure their own safety. This allows for more frequent follow-up as individuals on the first floor are of higher acuity and require more assistance.

Providing staff education on using a new electronic incident report form, implementing the Morse Fall Scale, creating a fall incident database, and reinforcing current best practices for fall risk precautions are interventions that will be carried out throughout the project's timeline.

This will equip the staff with evidence-based tools and up-to-date information to address the fall issue. As for the residents, a presentation will be provided on factors that may increase fall risk and preventative measures that can be taken. These approaches can help identify at-risk residents and provide more education, increasing patient safety to reduce fall-related morbidity and mortality.

Paper incident reports, as well as a lack of electronic sources, limit the ability of the database that could be conducive to correctly identifying fall risk factors. A lack of standardized fall risk assessment tools and the absence of new implementations post fall have kept fall rates high. The high number of falls and increased incidence of falls have proved to be costly, increasing hospital stay and patient healthcare costs.

SWOT Analysis

One of the strengths of the project is its contribution to patient safety by decreasing the incidence of falls and related injuries in the facility, while keeping implementation costs low. This also leads to a positive net income that can be used to fund other areas of the facility. Another strength is the standardization of reporting fall incidents, improving productivity and preventing unnecessary data. The newly created online database also helps staff see patterns and trends in patient falls. Lastly, staff and patients will be better informed about fall assessment tools and safety precautions. The project has limitless opportunities, including zero falls in the long-term care facility, improved patient outcomes and satisfaction, falls-competent staff, falls-prepared patients, and reduced facility costs.

However, some factors work against the project's implementation, such as a limited database of prior incident reports, lack of electronic sources, no prior standardized fall risk

assessment tool, and resistance to change. There are also threats, including increased incidence of falls and related healthcare costs, patient mortality and morbidity from fall-related injuries. The facility may also face resistance to implementing change processes and lack of awareness about the severity of falls and related injuries.

Cost Benefit Analysis

Fall-related events among older adults aged 65 years and older continue to increase as their longevity increases which can be detrimental in cost. A highlight from a report from the Center for Disease Control and Prevention demonstrated that the average cost of non-fatal fall injuries each year is about \$50 million. Another significant figure reports that the cost associated with fatal fall injuries was estimated to be \$754 million, implying that the medical cost spent on injuries related to falls continues to rise due to the growing aging population (CDC, 2020).

Currently, the facility does not incur any costs related to resident falls. The facility is unlicensed and is not penalized for high fall incidences. Additionally, the residents incur no charge as there is a congregational purse from which the funds to cover any medical expenses, including those sustained from a fall, are pulled. The facility's Clinical Director stated that there is no budget for these medical costs, and any expense is paid using the funds from the congregational purse. The purse is funded by sisters still living within the community through compensation they receive while working. Therefore, the project will aim to accrue no costs during its initiation due to the application of a free standardized fall risk assessment tool. The Morse Fall Scale will be utilized through an electronic charting system adapted using Google Forms and Google Sheets, which require no subscription and are free to use. Powerpoint presentations created will educate residents on fall risks and prevention measures on August 2nd. The benefit to implementing

these interventions while accruing zero cost is that they can continue to be expanded on and improve patient outcomes without the conflict of cost as a barrier.

Intervention

The desired change in practice was the decrease of resident fall incidences by twenty percent in six months. This project educated facility staff on the implementation of the Morse Fall Scale to identify residents at risk for falls, with reassessment performed every three months on residents who initially score as “low risk,” the standardization of fall risk precautions for those identified as “high risk,” and standardization of documentation when filling out incident reports. The staff education was provided via a presentation and was delivered to the staff by the Clinical Director, Clinical Care Coordinator, and Staff Educator. The presentation was designed to inform staff of the high rate of falls occurring in the facility and provide education on the interventions that would be implemented to decrease resident falls. A presentation was also given to residents designed to provide education on factors that increase the risk of falls and prevention measures to encourage active participation in their care.

Study of Intervention

To determine if the interventions were effective, resident fall data from July 2023 will be compared to the data from January 2024 to evaluate if there has been a twenty percent decrease in resident falls in the six months since implementation. The new data will be collected via an electronic incident report form that will auto-populate the information submitted into a database that can be used to compare to the past fall database compiled from paper incident reports from February 2022-July 2023.

Measures

This project started the Plan-Do-Study-Act (PDSA) cycle. During the Plan phase of the cycle, our group established a project objective, created a pre-intervention database cataloging resident falls from February 2022-July 2023, created an electronic incident report form to record resident falls post-intervention, created a presentation for staff providing education on interventions to be implemented, and created a presentation for residents regarding factors that increase fall risk and prevention measures. In the Do phase of the cycle, resident's individual fall risk was assessed using the Morse Fall Scale; for residents identified as "high risk," a discreet identifier (a yellow falling star) was placed on the wall outside of their room to alert staff of their designation, an educational presentation was delivered to facility leadership who then educated remaining facility staff using the same presentation over three weeks, and an educational presentation was given to residents. The Study phase will take place six months post-implementation to determine if the number of resident falls has decreased by twenty percent to ascertain if the interventions have been successful, through comparison between the incident report on falls in January 2024 and January 2023.. The Act phase will determine if the quality improvement project successfully reached the objective or if the problem still exists. If the objective was met, the next steps will be to encourage sustainability through routine assessments of resident's fall risk, and re-educate residents on fall precaution and risk factors. If the number of resident falls does not decrease by twenty percent, then the PDSA cycle should restart to determine a different strategy to decrease the number of falls at the facility by reassessing the 'plan' and 'do' section .

Section IV: Results

The resident education presentation took place on August 2nd and was a success. The audience was engaged and asked questions throughout the presentation. In addition, our team members performed physical demonstrations coinciding with the slides on how to fall correctly to provide a more visual form of education. The fall safety demonstrations were filmed with the videos added to the presentation for future viewers. While this is a stand-alone facility, the Clinical Director suggested placing the presentation on their website to engage sisters who are still active in the community.

Barriers

Barriers encountered during this quality improvement project are the staff's resistance to change, a disconnect in communication among staff, and unrealistic expectations. During the education presentation to the team leaders of the facility, there was pushback from one employee in particular. The staff member felt that using the Morse Fall Scale for assessment was inappropriate for the facility. When prompted regarding her reservations, she felt it was too rudimentary of an assessment as it does not consider other factors that can affect a patient's fall risk. We explained that the objective of this project is to establish an assessment, as previously, there has not been one established at the facility. Explanation regarding future cohorts was provided to expand on this project as the time constraints prevent our group from doing so.

Another barrier threatening this project is the need for more communication among staff members. The Clinical Director expressed interest in increasing the use of technology to catalog and document resident falls. However, there was resistance among staff when proposing the idea

regarding electronic forms and databases. Not all staff members seemed to be onboard with some needing help when attempting to access the forms via QR code.

The final barrier is unrealistic expectations of what can be accomplished in 12 weeks. As students, we have a finite amount of time to work on this project while balancing other commitments such as classes and outside jobs. Although we can begin quality improvement, the issue may only partially be solved at the end of this period.

Expected Outcome

Due to time constraints, we cannot obtain results for this project, as implementation will occur on August 2nd. The expected outcome of this project is to reduce the number of falls in the facility by 20% within six months after implementation and prevent future incidents. To measure our outcome, the number of falls in January 2023 will be compared to the number in January 2024 to see if there is a twenty percent decrease.

Section V: Discussion

Summary

The recommendation is to collect the data and compare the number of falls in January 2023 to the number in January 2024 to see if there is a 20% decrease. Once the data is analyzed, a conclusion can be made about the effectiveness of this quality improvement project. If the data from January 2024 shows a twenty percent decrease in falls, then our intervention, namely staff education, resident education, and implementation of standardized documentation regarding resident falls, standardized fall risk assessments, and standardized fall precautions, can be concluded as effective.

This project utilizes the PDSA Cycle. The Plan and Do portion has been completed for the first cycle of this PDSA. Once the fall data from January 2024 is obtained, then the Study phase can take place to determine if the interventions were effective. After the Study phase comes the Act phase, where the interventions and education, if determined successful, can be included in the training for new hires and when a new resident arrives at the facility. If the number of falls occurring at the facility has not decreased by twenty percent, then modifications can be made, and a new cycle of the PDSA process can begin.

Conclusion

The staff education presentation was recorded with voice-over and can be used in the future for new staff as part of their onboarding process and to refresh the knowledge of existing staff. The resident education presentation was also recorded with voice-over so future residents can be shown the presentation upon arrival at the facility.

This project is sustainable as it does not utilize additional resources that do not already exist within the facility. Additionally, if it does improve outcomes, the staff who were previously resistant to our interventions will likely buy into the project, which can increase and encourage a culture of safety within the facility and improve patient outcomes.

This quality improvement project focused on decreasing the number of resident falls within the facility by twenty percent in six months by identifying individual fall risk using a standardized fall assessment tool and providing staff and resident education. Data collected in January 2024 will evaluate if the interventions implemented decreased patient falls. This quality improvement project has a lot of potential to make a lasting impact within the long-term care facility by improving patient outcomes and reducing morbidity and mortality related to falls.

Section VI: References

- Albasha, N., Ahern, L., O'Mahony, L., McCullagh, R., Cornally, N., McHugh, S., & Timmons, S. (2023). Implementation strategies to support fall prevention interventions in long-term care facilities for older persons: A systematic review. *BMC Geriatrics*, 23(1). <https://doi.org/10.1186/s12877-023-03738-z>
- Centers for Disease Control and Prevention (2020). Cost of Older Adult Falls. Last modified July 9, 2020. <https://www.cdc.gov/falls/data/fall-cost.html>
- Dykes, P. C., Curtin-Bowen, M., Lipsitz, S., Franz, C., Adelman, J., Adkison, L., Bogaisky, M., Carroll, D., Carter, E., Herlihy, L., Lindros, M. E., Ryan, V., Scanlan, M., Walsh, M.-A., Wien, M., & Bates, D. W. (2023). Cost of Inpatient Falls and Cost-Benefit Analysis of Implementation of an Evidence-Based Fall Prevention program. *JAMA Health Forum*, 4(1). <https://doi.org/10.1001/jamahealthforum.2022.5125>
- Frith, K. H., Hunter, A. N., Coffey, S. S., & Khan, Z. (2019). A Longitudinal Fall Prevention Study for Older Adults. *The Journal for Nurse Practitioners*, 15(4), 295-300.e1. <https://doi.org/10.1016/j.nurpra.2018.10.012>
- Hussain, S. T., Lei, S., Akram, T., Haider, M. J., Hussain, S. H., & Ali, M. (2018). Kurt Lewin's change model: A critical review of the role of leadership and employee involvement in organizational change. *Journal of Innovation & Knowledge*, 3(3), 123–127. <https://doi.org/10.1016/j.jik.2016.07.002>
- Morris, R., & O'Riordan, S. (2017). Prevention of falls in hospital. *Clinical medicine (London, England)*, 17(4), 360–362. <https://doi.org/10.7861/clinmedicine.17-4-360>

Morris, M. E., Webster, K., Jones, C., Hill, A. M., Haines, T., McPhail, S., Kiegaldie, D., Slade, S., Jazayeri, D., Heng, H., Shorr, R., Carey, L., Barker, A., & Cameron, I. (2022). Interventions to reduce falls in hospitals: a systematic review and meta-analysis. *Age and ageing*, *51*(5), afac077.

<https://doi.org/10.1093/ageing/afac077>

One big family: Retired sisters thrive at Regina Residence. The Official News Source of the Roman Catholic Diocese of Orange. (2023, July 9).

<https://www.occatholic.com/one-big-family-retired-sisters-thrive-at-regina-residence/>

Strini, V., Schiavolin, R., & Prendin, A. (2021). Fall Risk Assessment Scales: A Systematic Literature Review. *Nursing reports (Pavia, Italy)*, *11*(2), 430–443.

<https://doi.org/10.3390/nursrep11020041>

World Health Organization. (2021). Falls. World Health Organization.

<https://www.who.int/news-room/fact-sheets/detail/falls>

Section VII: Appendices

Appendix A

Statement of Determination



Project: Statement of Determination and Non-Research Determination Form

Student Name: Ashley Samson, Breanna Cates, Jowel Ochoa, Lisa James, Esther Lowe, Matthew Ng

Title of Project: Fall risk identification and reduction in the gerontological population at a long-term care facility

This project intends to identify and reduce the risk of falls in the gerontological population of Regina Residence. Using evidence-based practice, we will screen each of the sisters in the facility using the Morse Fall Scale to identify their individual fall risk. Implementing this screening tool will allow us to assess those at risk for falls to prevent future incidents. We will provide education to both residents and staff regarding fall prevention measures. Additionally, we will educate staff on using the Morse Fall Scale to assess new patients and reassess current patients every three months to help improve patient outcomes and safety and reduce fall-related morbidity and mortality.

After creating an electronic database from the information gathered from the incident reports at the facility, we found that from February 2022 to June 2023, there were a total of a hundred falls at the facility, and 49% of the falls resulted in injury.

We aim to improve fall risk identification in the gerontological population at Regina Residence and reduce the number of falls by twenty percent in six months to improve safety measures and reduce fall-related morbidity and mortality.

We will use the Morse Fall Scale to assess each of the sisters in the facility and identify their individual fall risk. Once a resident is designated a fall risk, we will place a discreet identifier on the wall outside their room to alert staff of their risk status. We will educate staff on using the Morse Fall Scale, the importance of standardized fall risk precautions, and the importance of standardized documentation when filling out incident reports. Residents will also receive education on factors that increase fall risk and prevention measures.

The desired change in practice will be the implementation of the Morse Fall Scale to identify patients at risk for falls with reassessment performed every three months, the standardization of fall risk precautions for those identified as a fall risk, and a standardized form of documentation when filling out incident reports.

We created an electronic database to catalog the incident reports from February 2022 to June 2023, and from this data, we calculated how many falls occurred during that period. To measure the outcome of our interventions, we also created an electronic incident form



to standardize the facility's documentation regarding future falls. The data from the electronic incident form will automatically register the information submitted into a database where an electronic record of falls from August of 2023 onward will be stored. Our project aims to reduce the incidence of falls by twenty percent in six months. Therefore, to measure our outcome, we will compare the number of falls in January 2023 to the number in January 2024 to see if there is a twenty percent decrease.

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

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

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

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

Comments:

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

STUDENT NAME (Please print): Ashley Samson

Signature of Student:

DATE 6/22/23 _____

SUPERVISING FACULTY MEMBER NAME (Please print):

_____ **Dr. Lauren Knapp** _____

Signature of Supervising Faculty Member

_____ *Lauren Knapp* _____

DATE 6/7/23 _____

Appendix B

IRB Non-research Determination Form



EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

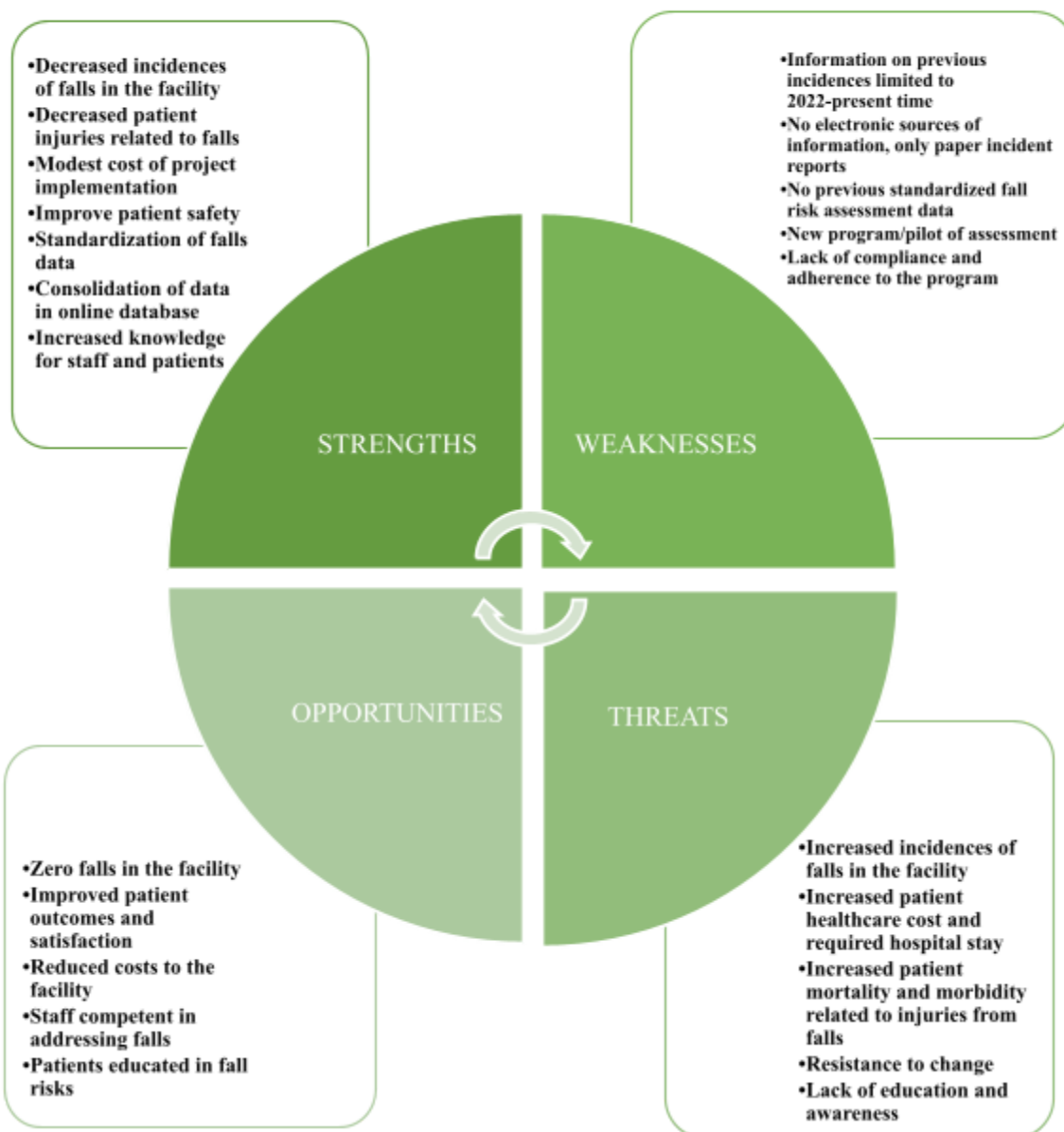
+ **Instructions: Answer YES or NO to each of the following statements:**

Project Title: Fall risk identification and reduction in the gerontological population at Regina Residence	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . ALL participants will receive standard of care.	X	
The project is NOT designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does NOT follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment, or evaluation of the organization to ensure that existing quality standards are being met. The project does NOT develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does NOT seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has NO funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., not a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>“This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board.”</i>	X	

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

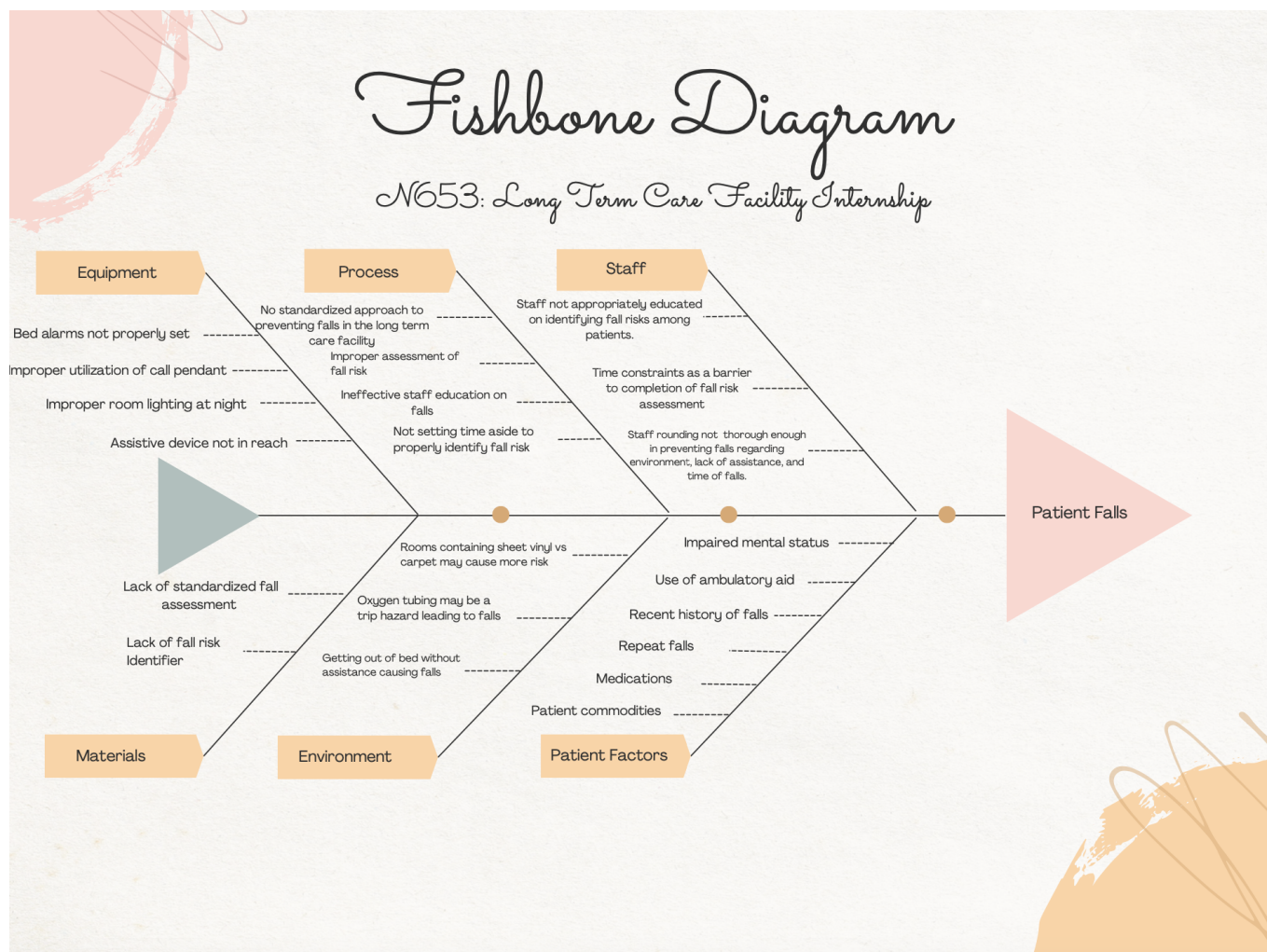
Appendix C

SWOT analysis



Appendix D

Fishbone Diagram



Appendix F

Annotated Bibliography

Albasha, N., Ahern, L., O'Mahony, L., McCullagh, R., Cornally, N., McHugh, S., &

Timmons, S. (2023). Implementation strategies to support fall prevention interventions in long-term care facilities for older persons: A systematic review. *BMC Geriatrics*, 23(1). <https://doi.org/10.1186/s12877-023-03738-z>

A systematic review that examines the feasibility of implementation strategies used for fall prevention interventions in long-term care facilities for older adults. The study found that the most commonly used techniques were staff training and education, but details of how the process is applied and outcomes were underreported. The effectiveness of fall interventions was often attributed to the programs themselves without identifying which implementation strategy had the most significant impact.

Dykes, P. C., Curtin-Bowen, M., Lipsitz, S., Franz, C., Adelman, J., Adkison, L., Bogaisky, M., Carroll, D., Carter, E., Herlihy, L., Lindros, M. E., Ryan, V., Scanlan, M., Walsh, M.-A., Wien, M., & Bates, D. W. (2023). Cost of Inpatient Falls and Cost-Benefit Analysis of Implementation of an Evidence-Based Fall Prevention program. *JAMA Health Forum*, 4(1). <https://doi.org/10.1001/jamahealthforum.2022.5125>

This case-control study focused on the cost of inpatient falls and the economic impact of implementing an evidenced-based fall prevention program. In this study, evidenced-based fall prevention programs were implemented in 33 medical and surgical units across 8 hospitals and observed from June 1, 2013, to August 31, 2019. Before the intervention,

there were 2503 falls and 900 injuries. After implementation, there were 2078 falls and 758 injuries, reflecting \$14,600 in net avoided costs per 1000 patient days. This study goes to show the financial burden a fall can have and the benefits of implementing a fall prevention program.

Frith, K. H., Hunter, A. N., Coffey, S. S., & Khan, Z. (2019). A Longitudinal Fall Prevention Study for Older Adults. *The Journal for Nurse Practitioners*, 15(4),295-300.e1. <https://doi.org/10.1016/j.nurpra.2018.10.012>

This is a longitudinal fall prevention study on older adults. This study aimed to improve gait and balance through exercise, reduction of polypharmacy, education about medications, and removal of potential hazards in the home environment. 30 participants were needed in each group, and participants must have fallen at least once. Over the 12-month study, participants showed significant improvement in the 4-Stage Balance test and 30-Second Chair Stand. This study also showed a reduction in the number of falls.

Hopewell, S., Copsey, B., Nicolson, P., Adedire, B., Boniface, G., & Lamb, S. (2020).

Multifactorial interventions for preventing falls in older people living in the community: a systematic review and meta-analysis of 41 trials and almost 20 000 participants. *British journal of sports medicine*, 54(22), 1340–1350.

<https://doi.org/10.1136/bjsports-2019-100732>

This study aimed to evaluate the effectiveness of fall prevention interventions in elderly individuals aged 65 and above who live in the community. A systematic review and meta-analysis were conducted to identify the long-term effects of these interventions, as well as any contributing factors. The analysis included randomized control trials with a

follow-up period of at least 12 months, comparing the identified interventions to usual care or usual care with advice. The results demonstrated that multifactorial interventions, particularly those that include exercise and mobility prescriptions, can reduce the likelihood of falls and lower the risk of recurrent falls. Recurrent falls were defined as two or more falls within a specific time frame.

Jehu, D. A., Davis, J. C., Falck, R. S., Bennett, K. J., Tai, D., Souza, M. F., Cavalcante, B. R., Zhao, M., & Liu-Ambrose, T. (2021). Risk factors for recurrent falls in older adults: A systematic review with meta-analysis. *Maturitas, 144*, 23–28.

<https://doi.org/10.1016/j.maturitas.2020.10.021>

This is a systematic review with a meta-analysis study on older adults with recurrent falls. This study focuses on determining the relative risk of recurrent falls for different types of fall risk factors. Risk that was classified included balance and mobility, environmental, psychological, medical, medications, sensory and neuromuscular, and sociodemographic. Out of those risks classified, four domains predicted recurrent falls which were balance and mobility, medication, psychological, and sensory and neuromuscular. These are viewed as a marker of frailty.

Morris, M. E., Webster, K., Jones, C., Hill, A. M., Haines, T., McPhail, S., Kiegaldie, D., Slade, S., Jazayeri, D., Heng, H., Shorr, R., Carey, L., Barker, A., & Cameron, I. (2022). Interventions to reduce falls in hospitals: a systematic review and meta-analysis. *Age and ageing, 51*(5), afac077.

<https://doi.org/10.1093/ageing/afac077>

This study focuses on the impact of fall prevention interventions in hospital settings and the associated risks. The study population includes hospitalized adults and interventions such as patient and staff education, assistive devices, policies and systems, medication management, environmental modification, rehabilitation, and management of cognitive impairment. A systematic review of 43 studies was conducted, and 23 of them were included in the meta-analysis. The analysis revealed that education was the most effective intervention in reducing falls. Both patient and staff education were found to reduce hospital falls, and multifactorial interventions were also shown to produce positive outcomes.

Reis da Silva, T. H. (2023). Falls assessment and prevention in the nursing home and community. *British Journal of Community Nursing*, 28(2), 68–72.

<https://doi.org/10.12968/bjcn.2023.28.2.68>

A journal article that investigates the assessment and prevention of falls in nursing homes. The article further highlighted the predisposing risk factors including medical, physical, and environmental factors as well as the consequences of falls especially among residents that reside in a nursing home. In conclusion, the article emphasized the importance of conducting multifactorial falls risk assessment tools for the geriatric population as their population continues to rise. Falls are also inevitable among this population but it can be managed through prevention efforts, hence the proposal for routine assessments in order to anticipate and prevent future falls.

Schoberer, D., Breimaier, H. E., Zuschnegg, J., Findling, T., Schaffer, S., & Archan, T. (2022). Fall prevention in hospitals and nursing homes: Clinical practice guideline.

Worldviews on Evidence-Based Nursing, 19(2), 86–93.

<https://doi.org/10.1111/wvn.12571>

A systematic literature review that analyzed about 79 randomized controlled trial studies on fall events, their consequences and fall prevention among older adults both in an acute care setting (hospitals) and a long term care facility/nursing home. The recommendations proffered by the multidisciplinary team as procedures to aid fall prevention among the geriatric population in both settings include multifactorial interventions, professionally supported body exercise interventions and education and counseling interventions. It was further deduced from the review that the use of a specific assessment tool for fall risk assessment, low-floor beds in hospitals, or body exercise interventions were not recommended and emphasized the need for further intervention studies that would strengthen credence in the evidence for low-floor beds, alarm sensor systems, medication review, and staff education in hospitals.

Sherrington, C., Fairhall, N., Kwok, W., Wallbank, G., Tiedemann, A., Michaleff, Z. A., ... & Bauman, A. (2020). Evidence on physical activity and falls prevention for people aged 65+ years: systematic review to inform the WHO guidelines on physical activity and sedentary behaviour. *International journal of behavioral nutrition and physical activity*, 17(1), 1-9.

A systematic review analyzed a series of randomized controlled trials evaluating fall prevention and risk assessment based on a patient's physical activity tolerance. The fall risk that a patient may pose would rely on their ability to maintain balance and conduct functional exercises. These interventions and positive outcomes are measured on a

patient's readiness to learn, risk for falls, and activity tolerance. Utilizing measurements such as exercise intensity and the risk for falls among the patient population. It was found that implementing any consistently conducted exercise can have up to a 24% reduction in falls.

Strini, V., Schiavolin, R., & Prendin, A. (2021). Fall Risk Assessment Scales: A Systematic Literature Review. *Nursing reports (Pavia, Italy)*, *11*(2), 430–443.

<https://doi.org/10.3390/nursrep11020041>

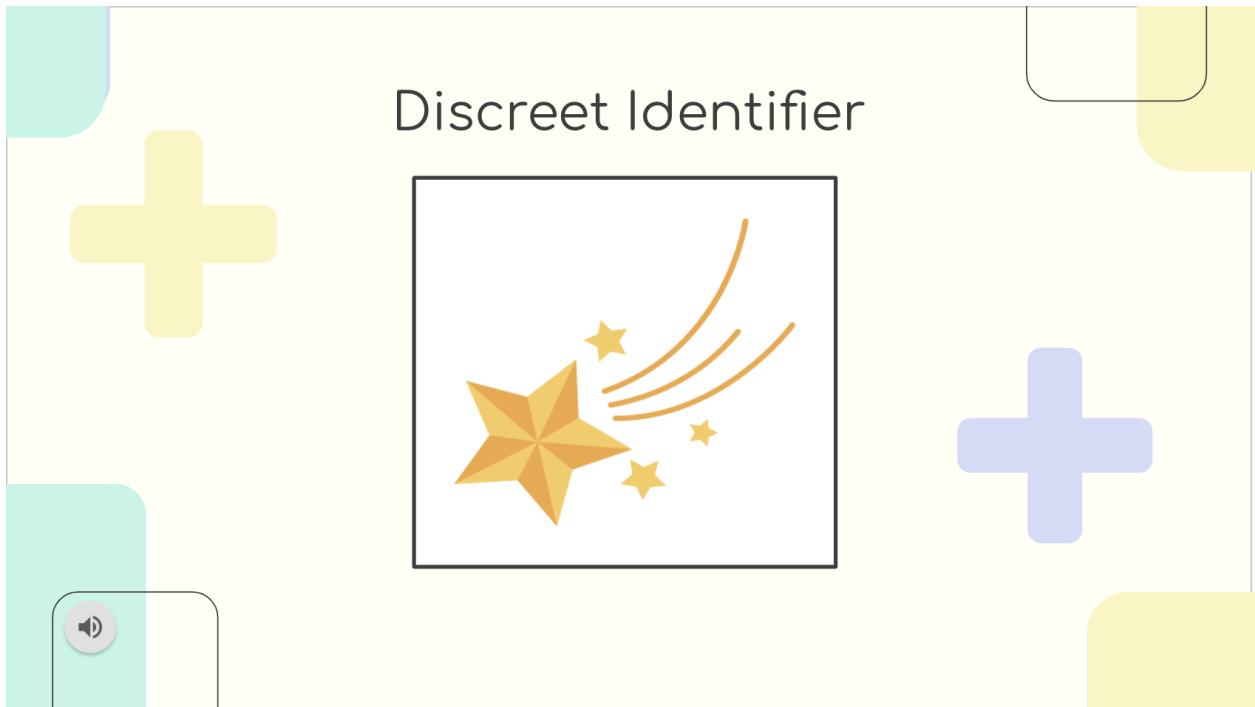
A systematic literature review that summarizes and analyzes different fall risk assessment tools available and the context in which they are applicable. A patient's fall risk is often multifactorial and can be affected by age, medication, and mobility. The article concludes that no ideal tool exists to provide the "perfect" risk assessment, and implementing multiple assessment tools will create a more comprehensive risk assessment.

Appendix G

Budget/Cost Benefit Analysis

Items	Costs (\$)	Benefit (\$)
Discreet identifier (lamination)	0 (available at the facility)	0 (Used the facilities laminator, less wear and tear on staff badge QR codes and discreet identifiers for patient name plates)
Google sheet, google forms, google slides	0	0 (Subscription payment is not required to access these programs)
Projector	0 (available at facility)	0 (Aids in better visualization of both current and future education presentations for both staff and residents)
Stationery–paper, pencils/pens	0	0 (Available at facility)
Total	0	Patient/ congregational purse saving \$351 to \$13616 (estimated cost of falls from Dyke et.al)

Appendix H
Discreet Identifier



Appendix I

Staff Education Presentation

Fall Risk Identification and Reduction

36,000
Falls among adults 65 and older caused over 36,000 deaths in 2020

3 Million
In 2020, emergency departments recorded 3 million visits for older adult falls

\$50 Billion
Older adult falls cost \$50 billion in medical costs annually with ¼ paid by Medicare and Medicaid

Why Start This Project?

- High rate of falls at the facility
- 1 out of 5 falls causes serious injury such as broken bones or a head injury
- Head injuries can be very serious if the person is taking certain medications like blood thinners

Past Fall Database

Resident (Last Name, First Initial)	Date of Incident	Time	CNA Assigned	Location of Incident	Assessive Device (Y/N)	Injury (Y/N)
Blair, J.	02/02/22	08:30	Shanika	Bedroom		
Blair, P.	02/10/22	08:30	Wanda	Bedroom		
Christophers, S.	02/04/22	06:00	Shaw	Bedroom		
Christophers, S.	11/18/22	22:30	Shawna	Bedroom		
Christophers, S.	01/06/22	18:30	Shanika	Bedroom		
Christophers, S.	01/10/22	15:30	No CNA Assigned	Flourish		
Christophers, S.	01/08/22	10:30	Wanda	Bedroom		
Christophers, S.	02/02/22	07:00	Wanda	Bedroom		
Christophers, S.	02/02/22	08:00	Shawna	Bedroom		
Christophers, S.	04/10/22	21:30	Shawna	Bedroom		
Christophers, S.	01/08/22	12:30	Shanika	Bedroom		
Edwards, M.	02/02/22	21:30	No CNA Assigned	Bedroom		
Edwards, M.	02/02/22	12:30	Wanda	Bedroom		
Edwards, M.	02/02/22	12:30	Shanika	Bedroom		
Quarles-House, F.	01/08/22	18:30	No CNA Assigned	Bedroom		
Quarles-House, F.	01/02/22	20:30	Shanika	Bedroom		
Quarles-House, F.	01/16/22	08:30	No CNA Assigned	Bedroom		
Quarles, S.	03/11/22	12:30	Shaw	Off Facility Site		
Hennessy, A.	02/02/22	14:30	No CNA Assigned	Bedroom		
Hennessy, A.	02/16/22	14:30	No CNA Assigned	Bedroom		

Data Collected from February 2022-July 2023

- Total Number of Falls: 107
 - February 2022-December 2022 → 60
 - January 2023-July 2023 → 47
- Percentage of Total Falls that Resulted in Injury → 51%

Data Collected from February 2022-June 2023

Our Project

Intervention

- Use the Morse Fall Scale to assess each sister's individual fall risk
- Educate facility staff
- Educate Residents

Goal

To establish standardized fall risk identification and reduce the number of falls by 20% in 6 months after implementation of our interventions

Staff Education

- Standardized Documentation Regarding Resident Falls
 - Electronic Incident Report Form
- Standardized Fall Risk Assessment
 - Morse Fall Scale Form
 - Discreet Identifier
- Standardized Fall Risk Precautions

Current Incident Report



Electronic Incident Report



Case Study



On Thursday July 6th at 02:30 AM, CNA Emily is making her mid shift rounds.

When passing room 211, she finds Sister Josephine Smith sitting on the floor beside her bed.

Sister Josephine is oriented and explains that she was getting up to use the restroom, lost her balance and slid to the floor.


She states that her right hip hurts and on examination, her right leg is shorter and externally rotated when compared to the left leg.

The fire department is called, and Sister Josephine is transported to St. Joseph's Hospital.

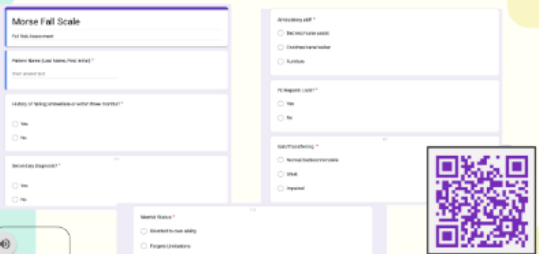




Morse Fall Scale Assessment


- Assesses and quantifies a patient's likelihood of falling
- Six Categories of Evaluation
 - Fall history
 - Presence of secondary diagnosis
 - Use of an ambulatory aid
 - Use of an IV apparatus or heparin lock
 - Impaired gait
 - Impaired mental status
- Scores
 - Low Risk: 25-50
 - High Risk: ≥ 51**
 - Discreet Identifier**



Morse Fall Scale Assessment Form

Discreet Identifier



Standardized Fall Precautions

- For residents identified as a **High Risk**
 - A discreet identifier placed on wall outside of room
 - Both bed and chair alarms on at all times
 - Residents are wearing their call pendants
 - Purposeful rounding:
 - Day shift → rounding every hour
 - Night shift → rounding every two hours
- Recommendation: reassess sisters identified as a Low Risk every 3 months or with a change in condition


Regina Residence Philosophy

Person centered and directed care

Sister's should be the center of care planning

Presentation Survey

Let us know if this was helpful!



References

- Centers for Disease Control and Prevention. (2023, April 12). *Older Adult Falls*. Centers for Disease Control and Prevention. <https://www.cdc.gov/falls/index.html>

Appendix J

Resident Education Presentation

Fall Risk Identification and Prevention

Fall Facts

36,000
Falls among adults 65 and older caused over 36,000 deaths in 2020

3 Million
In 2020, emergency departments recorded 3 million visits for older adult falls

\$50 Billion
Older adult falls cost \$50 billion in medical costs annually with ¾ paid by Medicare and Medicaid

Fall Facts

- 1 out of 5 falls causes serious injury such as broken bones or a head injury
- Head injuries can be very serious if the person is taking certain medications like blood thinners

Goal

Maintain Safety Health And Independence

Today's Topics

01 Factors that increase fall risk

02 Strategies to reduce fall risk

03 How to fall correctly to minimize injury

01 Factors that increase fall risk

Factors that Increase Fall Risk

- 01 Difficulties with Balance and Gait
- 02 Impaired Vision or Hearing
- 03 Medication Side Effects
- 04 Room Safety Hazards
- 05 Medical Conditions

02 Strategies to reduce fall risk

Six Tips To Help Prevent Falls

More than one in four people age 65 years or older fall each year, yet many falls can be prevented.

Talk with your health care provider about medication side effects

Make your home safer by using night lights, installing grab bars in the bathroom, and securing carpet to the floors

Stand up slowly to avoid dizziness

Do strength and balance exercises

Get your vision and hearing checked regularly

Use a cane or walker if you need more stability

Learn more about reducing your risk of falling at www.nia.nih.gov/falls-prevention.



Strategies to Reduce Fall Risk

- **Talk with your healthcare provider about medication side effects**
 - Read about the side effects of any medicines you take
 - If a drug makes you sleepy or dizzy, tell your doctor or pharmacist

Strategies to Reduce Fall Risk

- **Do strength and balance exercises**
 - Yoga and Qigong can both improve balance and muscle strength
 - Classes offered:
 - Chair yoga
 - Chair Qigong
 - Yoga
 - Community exercise room

Strategies to Reduce Fall Risk

- **Get your vision and hearing checked regularly**
 - Even small changes in sight and hearing are linked to an increased risk for falls
 - Wear glasses as your eye doctor advises
 - If you have a hearing aid, be sure it fits well and wear it

Strategies to Reduce Fall Risk

- **Stand up slowly to avoid dizziness**
 - Getting up too quickly can cause your blood pressure to drop

Strategies to Reduce Fall Risk

- **Use assistive devices such as a cane or walker if needed**
 - Appropriate use of canes and walkers can prevent falls
 - Other assistive devices examples:
 - A raised toilet seat or one with armrests
 - Grab bars for the shower or bathtub
 - A sturdy plastic seat for the shower

Strategies to Reduce Fall Risk

- **Reduce Room Safety Hazards**
 - Keep areas where you walk tidy
 - Don't leave books, papers, clothes, or shoes on the floor
 - Recommendations:
 - Night lights in the bathrooms

03

How to fall to minimize injury

The Sideways Fall



- Bend your knees
- Tuck your chin
- Keep your head lifted
- Keep your arms close to your chest
- Allow yourself to go limp
- Collapse on the outside of your bottom thigh
- Roll onto your torso or upper back

The Backwards Fall



- Tuck your chin to your chest
- Try to get your body (especially your bottom) closer to the ground
- Bend your knees into a deep squat
- Round out your spine and roll onto your back and shoulders
- Keep your arms by your sides

The Forward Fall



- Go limp
- Bend your knees and angle them to one side
- Keep your head tilted away from the ground as you fall
- Aim to land on the outside of your thigh
- Keep the movement going as you roll onto the side of your torso and upper back
- Think about curling your body as you roll

Sitting and Standing Safely from a Chair

Sitting Safely



- If using an assistive device, lock it in place
- Stand in upright in front of the seat
- Step back until you feel the chair against the back of your legs
- Reach with both hands for the arm rests
- Slowly begin to lower yourself into the seat

Standing Safely



- If using an assistive device, lock it in place
- Lean forward in the seat
- Wiggle your bottom from side to side until your at the chair's edge
- Make sure feet are planted securely on the floor
- Use the arm rests to help push yourself up and begin to rise
- Head over your knees as you stand up slowly

Strategies to Reduce Fall Risk

- Staff Rounding
 - To maintain **safety, health, and independence** staff will be
 - ◆ Rounding hourly during the day
 - ◆ Rounding every 2 hours at night
 - For sister's living upstairs:
 - ◆ After 3 falls, you will be **required** to move to the first floor

Thank You!

Faith, Foresight, Flexibility!

Appendix L

Clinical Incident Report and Responses

Clinical Incident Report

Please document information related to client falls

bmcates@dons.usfca.edu [Switch account](#)

Not shared

* Indicates required question

Resident Name (Last Name, First Initial) *
Ex: Smith, J.

Your answer _____

Room Number (1, 2, 3, etc.) *

Your answer _____

Date of Incident *

MM DD YYYY

Clinical Incident Report (Responses)							
A1	Timestamp	Resident Name (Last Name, First Initial) Ex: Smith, J.	Room Number (1, 2, 3, etc.)	Date of Incident	Time of Incident	Mental Status	Resident Description of the Fall Found by (Name of Staff Member) Dis
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							

Appendix M

Morse Fall Scale Form and Responses

Morse Fall Scale

Fall Risk Assessment

bmcates@dons.usfca.edu [Switch account](#)

Not shared

* Indicates required question

Patient Name (Last Name, First Initial) *

Your answer

History of falling; immediate or within three months? *

Yes

No

Morse Fall Scale (Responses)									
A1	C	D	E	F	G	H	I	J	
1	History of falling; immediate or within three months?	Secondary diagnosis?	Ambulatory aid?	IV/Heparin Lock?	Gait/Transferring	Mental Status	MFS Score	Risk (Low or High)	
2	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
3	No	Yes	Furniture(No assistive device)	No	Normal/bedrest/immobile	Oriented to own ability	45	LOW	
4	No	Yes	Crutches/cane/walker	No	Normal/bedrest/immobile	Oriented to own ability	40	LOW	
5	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
6	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
7	No	Yes	Crutches/cane/walker	No	Normal/bedrest/immobile	Oriented to own ability	40	LOW	
8	No	Yes	Crutches/cane/walker	No	Weak	Forgets Limitations	55	HIGH	
9	No	Yes	Crutches/cane/walker	No	Impaired	Oriented to own ability	50	LOW	
10	Yes	Yes	Crutches/cane/walker	No	Impaired	Oriented to own ability	75	HIGH	
11	No	Yes	Crutches/cane/walker	No	Normal/bedrest/immobile	Oriented to own ability	40	LOW	
12	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
13	No	No	Crutches/cane/walker	No	Weak	Oriented to own ability	25	LOW	
14	Yes	Yes	Crutches/cane/walker	No	Impaired	Forgets Limitations	90	HIGH	
15	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
16	No	Yes	Furniture	No	Weak	Forgets Limitations	70	HIGH	
17	No	No	Crutches/cane/walker	No	Normal/bedrest/immobile	Oriented to own ability	15	LOW	
18	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
19	Yes	Yes	Crutches/cane/walker	No	Impaired	Oriented to own ability	75	HIGH	
20	No	Yes	Bed rest/nurse assist	No	Normal/bedrest/immobile	Oriented to own ability	25	LOW	
21	No	Yes	Crutches/cane/walker	No	Impaired	Oriented to own ability	50	LOW	
22	No	Yes	Bed rest/nurse assist	No	Weak	Oriented to own ability	25	LOW	
23	Yes	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	65	HIGH	
24	Yes	Yes	Crutches/cane/walker	No	Impaired	Forgets Limitations	90	HIGH	
25	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
26	No	Yes	Crutches/cane/walker	No	Weak	Oriented to own ability	40	LOW	
27	Yes	Yes	Crutches/cane/walker	No	Normal/bedrest/immobile	Oriented to own ability	55	HIGH	
28	No	Yes	Bed rest/nurse assist	No	Normal/bedrest/immobile	Oriented to own ability	15	LOW	

Appendix N

QR Codes for Morse Fall Scale and Clinical Incident Report

