8-22-2025

Transforming Fall Prevention Using a Systems-Wide Approach

Jessica Pierce
Walden University

Walden University

College of Nursing

This is to certify that the doctoral study by

Jessica Pierce

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Catherine Garner, Committee Chairperson, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2025

Transforming Fall Prevention Using a Systems-Wide Approach

by

Jessica Pierce

Executive Summary Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2025

Summary

This Doctor of Nursinng Practice (DNP) project proposal is a quality improvement initiative aimed at reducing fall rates and associated injuries within a Veteran Affairs Medical Center (VAMC). The project aimed to implement a non-restrictive, evidence-based program to prevent falls that excludes the routine use of side rails and bed alarms and introduces a systematic patient-safety and personalized approach culture. Falls are a major safety concern in inpatient settings, especially at the VAMC, due to ineffective traditional prevention methods. Problems like inconsistent assessments, lack of evidence-based practices, and reliance on physical restraints contribute to high fall rates, harming patients and increasing healthcare costs. There is a clear need for standardized and systematic strategies to better prevent falls. The following question guided the project: Will an interprofessional team achieve consensus on a comprehensive fall risk reduction program? The consensus was achieved and led to successful development of the fall prevention program to be put into place during the implementation phase of this leadership initiative. The literature indicates that the removal of restrictive safety devices, such as side rails and bed alarms, leads to increased staff engagement and adherence to fall prevention protocols, resulting in enhanced patient respect and comfort. In addition to eliminating alarms and side rails, it is recommended to implement proactive rounding, regular education, interdisciplinary team meetings, decision support tools, and continue safety event reporting to enhance patient safety and reduce falls. The project aims to transform nursing practice towards individualized, inclusive, and restraint-free patient care, empowering nurses to focus on large-scale safety improvements. By valuing patient autonomy and addressing health equity, it

ensures that all patients, especially vulnerable veterans, receive respectful and tailored healthcare that meets their unique needs.

Background

Problem Statement

Inpatient falls remain a significant and preventable cause of injury, particularly among vulnerable populations like older adults and individuals with cognitive impairments (Li & Surineni, 2025). Despite existing safety policies at the VAMC, fall rates continue to rise, revealing ineffective traditional interventions such as bed alarms and side rails, which can exacerbate patient confusion and agitation. Inconsistent staff assessments and the lack of a unified, evidence-based fall prevention strategy have contributed to disjointed and ineffective practices. This situation calls for a system-level change that emphasizes proactive, non-restrictive safety measures and staff accountability to improve patient outcomes and uphold dignity for vulnerable groups.

Supportive Data

In fiscal year 2025 Quarter 1 (Q1), the VAMC experienced a significant increase in falls, with 91 incidents compared to 75 during the same period last year, underscoring the urgent need for a comprehensive fall prevention program (CLC Analytics, 2025). The rise in fall incidents, were often seen among patients with neurocognitive disorders, dementia, and Alzheimer's. Despite safety measures, falls increased, with alarms and side rails sometimes exacerbating confusion. In fiscal year 2024, major injury falls doubled from two in Q2 to four in Q3 and Q4, and in fiscal year 2025 Q1, five major injury falls were reported. With an average of 32 falls per month, there was an urgent need for improved fall prevention strategies. Regional data indicated falls are a leading cause of

emergency room visits for older adults (Wisconsin Department of Health Services, 2022), and the older veteran community is especially vulnerable due to chronic diseases, medication side effects, and balance issues.

Summary of Key Evidence

Studies showed that comprehensive fall prevention systems emphasizing proactive tactics over reactive alarms or restrictive side rails have better outcomes (Turner et al., 2023). A holistic approach, including customized care plans, staff training, and environmental modifications, significantly reduces fall rates (Almeida et al., 2024). Effective programs incorporate fall risk assessments, nonslip flooring, accessible call lights, and frequent staff rounds (Albasha et al., 2023). Evidence indicated that side rails and alarms can have adverse effects, such as more severe injuries when patients climb over railings and "alarm fatigue" among medical personnel (Hignett, 2005). Facilities that replaced alarms with regular monitoring, improved communication, and patient education saw significant fall reductions (Heng et al., 2020). A VA study found that reducing alarm reliance and introducing alternative safety measures improved staff response times, enhanced patient mobility, and decreased agitation (U.S. Department of Veteran Affairs, 2018).

Alignment

This VAMC is well-positioned to embrace change, supported by its culture of staff involvement in evidence-based practices and commitment to quality improvement. Leadership's openness to innovation fosters an environment conducive to effective and sustained change. The VAMC interprofessional teams comprising physical therapists, nurses, mental health professionals, and pharmacists brought diverse expertise critical for

comprehensive patient care strategies. Instructional materials were designed to equip staff with the necessary skills for adapting new procedures. The monthly convening falls and injury prevention committee will provide a structured platform for evaluating and implementing fall prevention strategies. With strong leadership support, a collaborative framework, and a proactive committee, the VAMC has a solid foundation for implementing and sustaining patient safety improvements.

Risks and Benefits

The facility's commitment to quality enhancement aligns with Veteran Health Administration (VHA) patient safety goals. Access to VA resources supports environmental improvements, training initiatives, and data collection, with a specialized fall prevention team overseeing implementation. Challenges include potential staff resistance to new methods and an initial learning curve increasing workloads. However, the program aligns with national fall prevention campaigns (Albertini et al., 2022) and could improve patient comfort, mobility, and satisfaction. Proactive rounding may enhance workflow efficiency and reduce alarm fatigue (Mileski et al., 2019). Potential threats include inadequate staff training and a temporary increase in falls during the transition if procedures are not consistently followed.

Potential Outcomes for the Organization

Implementing a side-rail-free and alarm-free environment coupled with a comprehensive fall risk reduction program at the VAMC may result in several benefits for the organization. Improved patient care and operational efficiency could lead to reduced medical costs and lower litigation risks, allowing for better resource allocation. The facility's reputation and regulatory compliance may also be enhanced, making the

VAMC a more attractive choice for both patients and staff. By fostering an inclusive environment, the organization can strengthen its position as a socially responsible entity and a leader in fall prevention best practices.

Positive Impacts for the Organization, Nursing, and the Population of Interest

This approach prioritizes personalized and nonrestrictive strategies, aiming to minimize fall-related injuries and boost patient satisfaction. Staff may benefit from improved job satisfaction and professional growth through additional training opportunities. As a result, the overall experience for patients and nursing staff will likely improve, contributing to a more positive atmosphere within the facility.

Project Development

Stakeholder Involvement

Stakeholders including nursing leadership, frontline staff, physical and occupational therapists, and the Falls Prevention Committee, played a crucial role in developing the comprehensive falls risk protocol. They will continue to be instrumental in implementing this proposed protocol and advancing the transition to a bed alarm-free and side rail-free environment. They will be pivotal in training staff to ensure the successful adoption of these initiatives. The roles, timelines, and responsibilities outlined in the Team Charter foster shared ownership, transparency, and sustainability of the interventions, while also enhancing interprofessional collaboration throughout the project's lifecycle.

Accreditation Standards

This project aligns with The Joint Commission National Patient Safety Goals, Ascellon Long Term Care Accreditation, and the Centers for Medicare and Medicaid

Services standards. The project will boost compliance with regulations, advance evidence-based practice, and put the facility in the position to enhance quality ratings and safeguard accreditation based on quantifiable, patient-focused results facilitated by institutional policies and federal healthcare performance requirements.

New Technology or Software

This project incorporated the electronic health record system already used at the VAMC to help with documentation improvements including updating templates for documentation. Utilization of known systems enables a smooth transition, low cost, and the ability to engage with staff as the staff would not be distracted from continuing the clinical process, nor would accountability in fall prevention weaken.

Training

A properly designed training course was created to ensure that all personnel become competent in utilizing the side-rail-free and alarm-free strategy. The training incorporates evidence-based practices, updated fall risk tool usage, and patient-centered interventions. Reinforcement sessions are recommended to be conducted through unit champions, and compliance with the training and be closely monitored. A seamless education model is proposed for implementation, integrating training into staff huddles and annual competencies. This approach fosters consistent and confident adoption of fall prevention techniques across all areas.

Regulatory, Legal, and Union Issues

The proposed project received site-level approval as a quality improvement initiative that utilizes deidentified data. The legal and compliance departments ensured alignment with the Veterans Heath Administration safety regulation. Early engagement

with the nursing union fostered transparency and garnered support from staff, which was crucial for the project's acceptance. Ethical considerations, including respect for patient autonomy and adherence to HIPAA requirements, were prioritized (Lu et al., 2024). This collaborative approach to regulatory compliance will facilitate a smooth implementation process, ensuring that the policy-oriented framework is effectively integrated into practice.

Logic Model

The presented logic model describes the key elements of the proposed evidence-based fall prevention quality improvement initiative. This plan was developed through interprofessional collaboration and consensus building. It contains essential inputs, organized activities, quantifiable results, and future short- and long-term outputs.

Figure 1

Fall Prevention Logic Model

Inputs	Activities	Outputs	Short-Term Outcomes	Long-Term Outcomes / Impact
Interdisciplinary team (nurses, PT, IT, QI)	Develop fall prevention protocol	Standardized, evidence-based fall prevention protocol	Improved staff knowledge & confidence	30% reduction in fall rates within 6 months
Leadership support	Conduct staff training and education	50 nurses trained and competency-validated	Increased staff compliance with fall prevention strategies	Enhanced patient safety and satisfaction
EHR & IT resources	Implement real-time EMR alerts and rounding checklists	Alerts integrated into EMR, signage posted, and checklists in use	Early identification and response to high-risk patients	Reduced injury severity and fewer costly fall-related incidents
Educational materials	Post visual reminders, provide educational flyers to staff and patients	Visible signage and patient/family engagement materials distributed	Increased patient and caregiver awareness	Improved care experience and patient-centered approach
Budget & incentives	Monitor compliance and collect outcome data	Weekly audits, satisfaction surveys, and outcome reports generated	Real-time feedback to drive continuous improvement	Sustainable culture of safety; scalable model for other VA facilities

Results

Implementation Plan Summary

The project led to a proposed comprehensive fall risk prevention program aimed at reducing falls by 30% within six months. The plan includes the development of a validated fall prevention protocol, which has already been established with input from an interdisciplinary team. All nursing staff will undergo training focused on side-rail-free and alarm-free strategies, with attendance and competency assessments documented. The implementation phase will feature daily compliance monitoring, clear signage, and real-time audits to ensure adherence. Continuous support will be provided to staff, along with ongoing data collection on fall incidents and patient outcomes to evaluate the program's effectiveness. By fostering collaboration, thorough training, and continuous evaluation, the VAMC aims to create a safer environment for patients and enhance overall care quality.

Budget Summary

The Fall Risk Prevention Program at the VAMC has a total budget of $5,900 allocated across key areas to enhance patient safety by reducing falls. The budget includes $3,750 for staff training, covering 50 nurses in 2-hour sessions at $37.50 per hour. Also, $250 is allocated for educational materials such as flyers and posters. IT support receives $1,000 for electronic medical record alerts and documentation changes, while $100 goes to supplies such as signage and checklists. Staff incentives are budgeted at $300, and $500 is set aside for data analysis to evaluate program effectiveness. Preventing 10 falls could save $140,000, yielding a return on investment of 2,771%, demonstrating significant financial benefits alongside improved patient safety.

Evaluation Plan

The Fall Risk Prevention Program's evaluation plan includes formative and summative evaluations. Formative evaluation components include an assessment in Week 6, pre- and post training quizzes in Week 7, weekly protocol adherence audits from Week 8 to Week 10, and staff feedback collection in Week 10. Summative evaluation measures include achieving a ≥ 30% fall rate reduction, financial impact analysis with over $100,000 in savings, and patient and staff satisfaction surveys from Weeks 11 to 24. Qualitative measures involve postimplementation focus groups with nursing staff and patient narratives for feedback. Sustainability strategies encompass regular fall audits, annual competencies in fall prevention, and quarterly leadership review meetings. This robust, evidence-based program aims for immediate success and long-term sustainability in mitigating harm and optimizing resources.

Data Collection

The data collection for the Fall Risk Prevention Program will utilize de-identified electronic health records, along with feedback from both staff and patients. This process will adhere to strict privacy and ethical standards. The information gathered will include the frequency of falls, the severity of injuries, adherence to established procedures, and overall patient satisfaction. Staff audits and training assessments will provide valuable insights into the program's implementation. Since this quality improvement initiative involves the retrospective use of data within standard care practices, an Institutional Review Board (IRB) review is not required. To ensure the program's effectiveness, continuous monitoring will be conducted, allowing for accurate and responsive adjustments based on the results of the fall prevention efforts.

Conclusions

The proposed quality improvement project aims to implement a side-rail-free and alarm-free environment alongside a comprehensive fall risk reduction program at the VAMC. This initiative is designed to significantly enhance patient safety and improve the quality of care, ultimately fostering a culture of safety and promoting patient-centered care. By focusing on these innovative strategies, the project seeks to create a safer and more supportive environment for all patients. Success relies on ongoing education, staff compliance, and interdisciplinary collaboration. Continuous monitoring, decision support tools, updated policies, proactive rounding, and enhanced patient education are crucial for sustaining improvements. This initiative addresses immediate fall prevention concerns and sets a precedent for broader systemic change within the facility. As a model for other health care settings, this approach demonstrates that prioritizing patient well-being and empowering health care providers can lead to significant advancements in patient safety and care, reinforcing the VAMC's commitment to exemplary care for U.S. veterans.

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

Albertini, A. C. da S., Fernandes, R. P., Püschel, V. A. de A., & Maia, F. de O. M. (2022). Person-centered care approach to prevention and management of falls among adults and aged in a Brazilian hospital: A best practice implementation project. *JBI Evidence Implementation*, *21*(1), 14–24. https://doi.org/10.1097/xeb.0000000000000356

Almeida, A. S., Paguia, A., & Neves, A. P. (2024). Nursing interventions to empower family caregivers to manage the risk of falling in older adults: A scoping review. *International Journal of Environmental Research and Public Health*, *21*(3), 246–246. https://doi.org/10.3390/ijerph21030246

CLC Analytics. (2025). *CLC compare (CMS benchmarking)*. https://reports.vssc.med.va.gov/

Heng, H., Jazayeri, D., Shaw, L., Kiegaldie, D., Hill, A.-M., & Morris, M. E. (2020). Hospital falls prevention with patient education: A scoping review. *BMC Geriatrics*, *20*(1), 1–12. https://doi.org/10.1186/s12877-020-01515-w

Hignett, S. (2005). Do split-side rails present an increased risk to patient safety? *Quality and Safety in Health Care*, *14*(2), 113–116. https://doi.org/10.1136/qshc.2004.011122

Li, S., & Surineni, K. (2024). Falls in hospitalized patients and preventive strategies: A narrative review. *The American Journal of Geriatric Psychiatry: Open Science, Education, and Practice*, *5*(5), 1–9. https://doi.org/10.1016/j.osep.2024.10.004

Mileski, M., Brooks, M., Topinka, J. B., Hamilton, G., Land, C., Mitchell, T., Mosley, B., & McClay, R. (2019). Alarming and/or alerting device effectiveness in reducing falls in long-term care (LTC) facilities? A systematic review. *Healthcare*, *7*(1), 51. https://doi.org/10.3390/healthcare7010051

Turner, K., McNett, M., Potter, C., Cramer, E., Taweel, M. A., Shorr, R. I., & Mion, L. C. (2023). Alarm with care—a de-implementation strategy to reduce fall prevention alarm use in US hospitals: A study protocol for a hybrid 2 effectiveness-implementation trial. *Implementation Science*, *18*(1) 70. https://doi.org/10.1186/s13012-023-01325-9

U.S. Department of Veteran Affairs. (2018). *Clinical Alarm Reduction: A Method for Success.*Va.gov. https://www.patientsafety.va.gov/features/Clinical_Alarm_Reduction.asp

Wisconsin Department of Health Services. (2022). *Wisconsin EMS and Falls Report EMS and Falls in Wisconsin, 2022 Report*. https://www.dhs.wisconsin.gov/publications/p03493.pdf