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Best Practices to Reduce Patient Falls in Skilled Nursing Facilities in Virginia

Kianna J. Tinsley
Walden University

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Walden University

College of Management and Human Potential

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Kianna Tinsley

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. Miriam Ross, Committee Chairperson, Health Sciences Faculty
Dr. Matt Frederiksen-England, Committee Member, Health Sciences Faculty

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

Walden University
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Best Practices to Reduce Patient Falls in Skilled Nursing Facilities in Virginia

by

Kianna Tinsley

MHA, Strayer University, 2016

BA, High Point University, 2002

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Abstract

Patient falls in skilled nursing homes highlight the need for effective, evidence-based strategies to reduce falls and improve residents' quality of life. The purpose of this integrative review was to identify administrative strategies for reducing patient falls within skilled nursing facilities. The review question centered on the most effective strategies and best practices that healthcare administrators can use to reduce patient falls and injuries and increase patient satisfaction. The Donabedian model served as the theoretical framework, providing a strong foundation for evaluating health services and quality of care to reduce patient falls. A comprehensive literature review identified 50 relevant articles, and 25 peer-reviewed articles published between 2020 and 2025 were selected for in-depth analysis using the John Hopkins evidence-based practice model. Further analysis identified six main themes and eight subthemes related to problem-solving strategies for fall prevention. The six main themes were: improve organizational culture, foster teamwork, establish protocols to educate staff, improve facility navigation without barriers, strengthen patient-centered care, and facilitate staff responsibility related to safety protocols. Key subthemes were: promote staff collaboration, strengthen IDT communication, and enforce consistent compliance practices. Three recommendations emerged from the analysis: (a) establish comprehensive employee training programs and patient education, (b) evaluate and use fall risk devices that are customized for each patient, and (c) use fall assessment tools to achieve a better quality of life. The findings indicated that the adoption of targeted fall prevention strategies – along with Donabedian quality processes – may lead to improvements in patient care, which can facilitate positive social change for patients, staff, and families.

Part 1: Practice-Based Problem

Problem of Interest

Falls within high-risk populations remain a primary safety issue, adversely affecting patient health outcomes through both physical injury and psychological distress (Albasha et al., 2023a). Elderly populations are more susceptible to falling due to co-morbidities, frailty, disabilities, and cognitive decline and skilled nursing administrators are faced with the consequences of falls because it increases health care costs for staff and affects patient satisfaction (Boyce et al., 2022; Colon-Emeric et al., 2024). Also, falls continue to represent a significant challenge for emergency departments, with approximately 3 million emergency department visits and 1 million hospitalizations annually among the elderly attributed to falls (Centers for Disease Control and Prevention [CDC], 2024). These incidents resulted in 319,000 hospitalizations for hip fractures and additionally falls are recognized as the leading cause of traumatic brain injuries (CDC, 2024).

Virginia nursing homes have consistently faced challenges related to falls, safety concerns, and staffing shortages (Cote et al., 2022). This study aimed to identify evidence-based strategies to reduce falls in Virginia nursing homes, promoting patient safety through scholarly approaches that facilitate meaningful change (Virginia Department for Aging, 2023). Data indicated that residents of nursing facilities experience a higher incidence of falls compared to individuals residing in the broader community (Burgess et al., 2024). Within nursing home settings, as many as 50% of older adults fall annually, with 40% experiencing recurrent falls (Albasha et al., 2024). Guided by the Donabedian structure-process-outcome framework, this integrative review

has the potential to contribute to positive social change by informing health care administrators of organizational and care delivery strategies that reduce fall risk, enhance resident safety, and improve the quality of life in skilled nursing facilities.

Healthcare Administration Problem

Background

The challenge facing nursing home health care administrators is the necessity to reduce and prevent patient falls, as such incidents can incur substantial costs for organizations in terms of reputation, financial outlay, and patient satisfaction. Publicly available nursing home ratings highlight that falls may have serious negative repercussions for both patients and nursing homes (Center for Medicare and Medicaid Services [CMS], 2025). The elderly population in Virginia is projected to increase to 18.9% or 2.2 million by 2030, nearly double the figures recorded in 2010 (Virginia Department for Aging, 2023). Given this demographic shift, it is essential for nursing home facilities to be adequately prepared to accommodate older residents and ensure their safety.

One consequence that occurs when elderly patients experience falls, is that it may contribute to decreased confidence overall resulting in a fear of falling and resistance to walking as much as they should to remain independent (Ebrahim et al., 2025; Ozen et al., 2023). Individuals who have previously fallen can be at higher risk of recurrence and may be less inclined to report subsequent incidents. Ongoing analysis of fall occurrences and the implementation of improved prevention strategies in skilled nursing facilities are necessary (Ebrahim et al., 2025; Schoberer et al., 2022). Although there are numerous

CMS regulations addressing falls, decreasing their frequency in nursing homes remains an ongoing challenge (CMS, 2025).

Operational Problem

Falls and associated injuries necessitate prompt intervention from healthcare administrators and nursing staff, as these incidents not only diminish the quality of patient care but also impose significant financial burdens (Chowa, 2021). Recent studies have reported that, in the United States, Medicare incurred \$29 billion, and Medicaid incurred \$9 billion in costs associated with non-fatal falls (Fischer, 2023). The Joint Commission has identified key factors contributing to falls as inadequate assessments, ineffective communication, insufficient supervision, unsafe environments, staffing limitations, and issues with leadership quality (as cited in Chowa, 2021).

It is important to note that staff in long-term care facilities have expressed concerns regarding their ability to effectively manage patient falls (Fischer, 2023). Studies have highlighted several challenges, including insufficient knowledge and skills among facility staff, as well as issues related to staffing ratios and workload (Albasha et al., 2023b; Fischer, 2023). The relationship between inadequate staffing and the incidence of falls was supported by data; for instance, studies estimated that up to 80% of falls may occur when a patient is unattended in their room (Horta-Reis, 2023; Roderman et al., 2024).

Ideal State of Operations

Health care administrators are tasked with fostering a safe and engaging environment in nursing homes that promotes quality of life and enhances patient satisfaction. In skilled nursing facilities, the optimal operational goal is to prevent and

minimize falls to the greatest extent possible, recognizing that the prevalence of co-morbidities and patient frailty increases the likelihood of such incidents (Gindoff & Moyer, 2022; Hosseini, 2022). Reducing fall rates and associated injuries contributes to greater patient confidence and satisfaction with care, while simultaneously decreasing healthcare expenditures for this at-risk demographic. Administrators who implement robust safety protocols and direct their staff to perform effective pre- and post-intervention measures can reduce the incidence of falls and related injuries in skilled nursing facilities (Hosseini, 2022; Kuhnnow, 2022; Roderman et al., 2024). Additionally, it is important for administrators to maintain appropriate staffing levels and ensure that personnel receive comprehensive training on fall assessment tools tailored to individual resident needs.

Professional Practice Gap Statement

Research has indicated that approximately 50-75% of residents in skilled nursing facilities experience falls each year, resulting in nearly 1,800 deaths annually along with other serious injuries (The Nursing Home Abuse Center, 2024). These incidents commonly occur among patients who are infirm, elderly, and unable to walk independently. According to the CDC (2024), falls are a preventable occurrence, and specialized fall prevention programs have demonstrated positive effects on care outcomes among nursing facility residents. While comprehensive research has not identified established standardized goals or benchmarks for falls in skilled nursing facilities, largely due to underreporting of falls resulting in major injury and hospitalization, state and national data can inform objective setting. In Virginia, the current rate of falls with major injury among long-term care residents is 3.61%, exceeding the national average of 1.5 to

1.7% (Gregerson, 2025). Administrators may develop meaningful objectives for referencing current annual fall incidence rates (Kuhnnow et al., 2022; Linnerud et al., 2023). Monitoring quality indicators, such as annual fall rates per bed and applying a benchmark of 1.5 to 1.7 falls per bed as suggested by Roderman et al. (2024) can support more effective evaluation and improvement of patient safety outcomes.

Summary of Evidence

The aging population, people aged 65 and older, may become progressively weaker and they often require assistance and care from skilled nursing facilities. Administrators encounter the challenge of keeping this demographic safe as they are the most susceptible population at risk of falling due to frailty, limited mobility, and chronic co-morbidities (Miura & Kanoya, 2025). The elderly residing in nursing homes and other care facilities for seniors, are also at an increased risk of falling due to their change of environment from home to long term care (Ozen et al., 2023). The reasons for falls are multifactorial yet medication use, overall health of the patient, co-morbidities, generalized weakness, and cognitive health are commonly associated with the incidence of falling among seniors (Roderman et al., 2024).

Falls can have deadly consequences for older adults, as injuries from falls are the second leading cause of death worldwide for this age group (Albasha et al., 2023b). Fifty percent of elderly residents in long-term care facilities fall each year and 40% will have recurrent falls (Albasha et al., 2023b). Aside from significant injuries, the impact of falls can diminish the quality of life for seniors, create fear of falling, anxiety, loss of independence and increase healthcare costs (Miura & Kanoya, 2025). The fear of falling

can lead to limited mobility or immobility which can contribute to physical and cognitive weakness, therefore creating the cycle for repetitive falls (Ozen et al., 2023).

Fall prevention is a critical aspect of care in nursing homes; however, it is frequently overlooked due to insufficient knowledge, limited staff education, high staff turnover, and funding constraints. Prior studies have indicated that areas for improvement in skilled nursing facilities and other facilities of care for the elderly include medication review, body exercise interventions, staff, patient or resident education, medical devices for fall and injury prevention, and increased observation, and post fall analysis (Schoberer et al., 2022). According to Wallace and Vannes (2024), facilities lack adequate screening instruments and without sufficient screening patients often underestimate their mobility and physical capabilities as their health declines.

Various fall prevention strategies have demonstrated effectiveness; however, these approaches may only be effective for a limited time unless these practices are included at the outset of the patient's care plan and supported by comprehensive staff and caregiver education at the nursing facility (Roderman et al., 2024). Facilities must maintain compliance with patient care plans despite staff fluctuations and ensure that training is periodically assessed for effectiveness. While falls can often be preventable, they cannot be eliminated entirely, so minimizing their impact is essential to reducing the risk of serious injuries that could result in emergency department visits, hospital admissions, and increased healthcare costs (Roderman et al., 2024).

Purpose of the Integrative Review

The purpose of this integrative review was to identify administrative strategies for reducing patient falls within skilled nursing facilities. Patient falls have a significant influence on residents' quality of life and their overall satisfaction with facility living.

Integrative Review Question

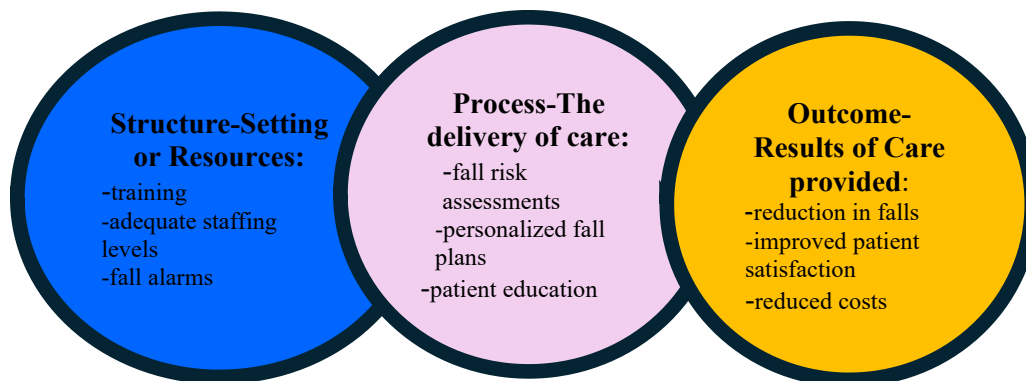
The review question for this integrative review is the following: What are the most effective strategies and best practices that healthcare administrators can use to reduce patient falls and injuries in skilled nursing facilities and increase patient satisfaction?

Theoretical and/or Conceptual Framework

The theoretical framework for this study was the Donabedian model as this framework provides a foundation for examining health services and quality care in skilled nursing facilities (Donabedian, 1966). The Donabedian model encompasses three categories: structure, process, and outcomes. Structure refers to how care is delivered, process involves transactions between patients, providers, and healthcare teams, and outcomes relate to the effects of quality results related to patient care (Donabedian, 1988). This model involves executing practice provisions that provide well-structured beneficial nursing care. Figure 1 illustrates the Donabedian process.

Figure 1

Illustration of the Donabedian Process



Note. Adapted from “Contributory Factors Related to Patient Safety Incidence: A Nursing Perspective”, by G. Adu, G., & S. M. Zuma 2024, *Health SA = SA Gesondheid*, 29(2296). <https://doi.org/10.4102/hsag.v29i0.2296>

The three fundamental elements to determine the quality of care are managers, nurses, and patients (Yang et al., 2025). Implementing the Donabedian model in skilled nursing facilities equips administrators and nursing staff with a variety of strategies that foster adhering to policies and provides a clearer lens on evaluating healthcare quality (Saheb & Saheb, 2024). Findings of one study illustrated remarkable statistical correlation among falls rates and clinical and administrative policies (Guzmán-Leguel & Rodríguez-Lara, 2025). Analyzing the structure of skilled nursing facilities in the context of falls prevention illuminates areas of improvement such as workflows using post fall assessments, staffing shortages, and the need for additional training. Patient satisfaction and reducing healthcare costs are often the primary catalysts of administrators that apply this model (Saheb & Saheb, 2024). Ensuring high-quality care is a fundamental priority, and it requires ongoing evaluation to improve existing systems and processes. The

Donabedian model is essential for effectively addressing issues related to falls in skilled nursing facilities. The Donabedian model offers a structured approach for administrators seeking to strengthen quality protocols, including individualized fall screening surveys, post fall assessments, and staff questionnaires. These measures may be systematically implemented by administrative personnel and overseen by staff to promote enhanced care and safety within skilled nursing facilities.

Part 2: Literature Review, Quality Appraisal, and Analysis

Literature Search Strategy

This review was conducted to determine the best fall prevention strategies in long-term care facilities. The elderly residing in long-term care facilities are three times more likely to sustain a fall than those living in the community (Gindoff & Moyer, 2022). A report from Office of Inspector General (2014) contained details regarding adverse outcomes in long-term care settings, indicated that injuries sustained to falls can often be prevented. These findings prompted the reduction of preventable falls as a primary Quality Assurance and Performance Improvement (QAPI) program in 2015 (Boyce et al., 2022). The best practices for fall reduction among elderly residents in long-term care settings were assessed in this literature review using sources from 2021-2025.

The databases included Academic Search Complete, Scopus, CINAHL, Medline, EBSCO, Applied Sciences, IEEE Explore, Science Direct, Computers & Applied Sciences and Directory of Open Access Journals. A variation of search terms and Boolean operators were implemented in the search with AND/OR throughout the databases to include *falls reduction detection, risks, nursing homes, long-term care facilities, multifactorial interventions, older adults, and consequences*. There were approximately 712 articles that were identified during the preliminary search; however, after using additional filters to include restrictions of peer-reviewed articles only and sources from the past 5 years, the results were reduced to 125 articles. From these results 75 were excluded for obvious reasons, leaving 50 articles for the final analysis.

Table 1 includes the inclusion and exclusion criteria used in the search for the reviewed articles. There were numerous articles covering fall prevention, reduction, and

risks. The specific demographic for this research included older adults residing in nursing homes or long-term care facilities. A few various medical settings were included to provide additional recommendations for fall prevention practices. Nonrelevant environmental settings and health care facilities and studies with smaller sample sizes were excluded to prevent bias and non-reliability.

Table 1

Inclusion and Exclusion Search Criteria

Inclusion search criteria	Exclusion search criteria
<ul style="list-style-type: none"> • 2021-2025 • Peer-reviewed scholarly journal articles • Fall prevention • Fall reduction • Falls nursing facility/nursing homes • Fall assessment • Consequences of falls • Fall risk factors • Falls elderly 	<ul style="list-style-type: none"> • Articles prior to 2020 • Non-peer-reviewed studies • Patients under 60 • Populations in the community • Sources with insufficient outcomes data. • Sources with high risk of bias. • Sources of small sample sizes.

Quality Appraisal

A total of 25 articles were thoroughly assessed and reviewed using John Hopkins nursing evidence-based practice model and research evidence and non-research evidence appraisal forms. The results of the appraisal include 18 level III articles and seven level V articles. There were 15 articles rated as good quality and 10 articles rated as high quality. Most of the articles were from sources from 2022-2024 and five were from sources from 2025 to provide the most current data on practices. The articles reviewed demonstrated valuable findings with consistent results, that used adequate sample sizes, definitive

conclusions, and consistent recommendations based on a sufficient comprehensive review. Appendix C provides additional analysis of the appraisal results.

Thematic Analysis of Literature

The sources used in this project consisted of peer reviewed articles that used a variety of methods to provide their analyses such as a combination of questionnaires, surveys, group interviews, previous literature synthesis, ANOVA statistics, Mokken analysis, and data from numerous fall assessments. Themes and subthemes were coded from 25 sources and are further discussed in Appendix D. Table 2 contains the themes and subthemes used to determine the final themes used for this review.

Table 2

Themes Used to Determine the Final Themes

All themes	All themes
<ul style="list-style-type: none"> • Staff training • Fall prevention • Fall guidelines • Modifications of exercise • Fall risk assessment tools • Multifactorial prevention strategies • Facility barriers • Evidence-based support 	<ul style="list-style-type: none"> • Significance of ownership • Fall predictors • Safe environments • Multidisciplinary approach • Modifiable risk • Fall consequences • Tailored interventions for effectiveness

Understanding risk factors for falls is crucial for effective prevention. Albasha et al. (2023b) identified environmental safety evaluation, staff education, and individual observation as key strategies. Facility administrators should assess facility design, provide staff training, and use assistive tools to lower fall risks. Tools like the Morse Fall Scale, Scott Fall Risk Screen, and InterRAI protocols evaluate mobility, cognition, and medication factors. Fall prevention programs and Electronic Health Record (EHR) data

analysis enhance risk identification. Evidence-based interventions, such as post-fall risk meetings and universal precautions, help target risk factors effectively. There are additional factors to note, which include the documentation of fall risk assessments for effective care planning and the use of fall risk scores. Pre- and post-fall interventions offer long-term care administrators' effective strategies to reduce falls and improve outcomes (Chowa, 2021). Table 3 shows identified themes and subthemes that will be used in this review.

Table 3

Final Themes and Subthemes

Main themes	Subthemes
Improve organizational culture and leadership skills	Implement a supportive leadership model that promotes staff collaboration.
Foster teamwork and collaboration	Strengthen IDT communication.
Establish protocols to educate staff about fall prevention	Facilitate frequent, brief and concise educational training.
Determine ways to improve facility navigation without barriers	Assess protocols by profit model and type.
Strengthen patient-centered care	Enforce consistent compliance practices. Tailor assessments and care plans for individual risk factors.
Facilitate staff ownership related to safety protocols	Reduce injuries and enhance the quality of life. Empower staff to evaluate and optimize safety tools and environments.

Conclusion

There were six main themes and eight subthemes discovered during the analysis of the 25 studies used in this integrative review. The themes and subthemes include key components of determining the most beneficial fall prevention guidelines for long-term

care facilities. The growing elderly population is the highest demographic for risk of fall prevalence and consequences of falls, which is an increasing challenge that causes a strain on health care administrators and staff, and diminishes health outcomes for long-term care residents.

Part 3: Presentation of Results

This section presents findings from the thematic analysis and highlights the critical role that staff members in skilled nursing facilities play in identifying patients at risk of falling (see Albasha et al., 2024). Enhancing patient care necessitates employing comprehensive fall assessment tools that evaluate gait and balance, co-morbid conditions, and medication compliance. The following information outlines how the identified themes and subthemes relate to effective implementation of fall prevention measures (see Colon et al., 2024).

Thematic Concepts Map

After a thorough literature review was conducted, 25 sources were selected and analyzed to determine best practices for fall prevention in skilled nursing facilities. The six principal themes encompass enhancing organizational culture and leadership competencies, promoting effective teamwork, implementing protocols for staff education on fall prevention, identifying strategies to improve facility accessibility, advancing patient-centered care, and encouraging staff accountability regarding safety procedures. Additionally, eight subthemes were identified to provide further detail and support the findings related to these main themes. The thematic concepts map offers a visual representation of the integration of fall prevention as the central topic within a structured framework that links both themes and subthemes. This framework effectively communicates essential information, illustrating how different types of information can be conveyed to relevant stakeholders.

Framework

The Donabedian model was selected for this integrative review as it best supports improving patient outcomes through analysis of staffing, operations, tools, and processes in skilled nursing facilities and the use of structure, process, outcome is evident throughout this section as related in all themes and subthemes. Research has indicated its effectiveness in assessing and enhancing care quality across various healthcare settings (Yang et al., 2025). Applying the Donabedian model to assess a healthcare environment enables validation of the connection between structure and process indicators. This approach is instrumental in identifying organizational characteristics that may be removed, adjusted, or supplemented with new tools to achieve optimal patient care and enhance both quality and satisfaction (Binder et al., 2020).

Explanation of Themes and Subthemes

Improve Organizational Culture

Miura and Kanoya (2025) discussed the importance of organizational management and staff education, with strong emphasis on the impact of staff training collaboration of the interdisciplinary team and support from leadership for fall prevention.

Implement a Supportive Leadership Model

Linnerud et al. (2023) recommended leaders use a four-part fall prevention strategy, while Chowa (2021) emphasized that nursing directors should develop fall prevention projects involving staff who work most closely with patients.

Assess Protocols by Profit Model and Type

Hosseini (2024) and Kuhnow et al. (2022) emphasized that organizational assessments are necessary when considering the adoption of the optimal fall prevention plan.

Foster Teamwork and Collaboration

Hosseini (2024) highlighted findings from previous studies related to the strengthening of teamwork by encouraging communication between both senior clinical staff and certified nursing assistants (CNAs) to encourage fall prevention and enhance education.

Strengthen IDT Communication

Albasha et al. (2023b) reported that effective communication among staff members and timely responses to residents' needs are crucial factors in fall prevention.

Establish Protocols to Educate Staff About Fall Prevention

Burgess et al. (2023) and Colon-Emeric (2024) emphasized that improving staff education reduced adverse patient outcomes and improved staff confidence in addressing falls.

Facilitate Frequent, Brief, and Concise Educational Training

Albasha et al. (2024) provided information that regular, focused training is effective in sustaining staff engagement and identified a correlation between specialized training, increased staff confidence, and a reduction in falls.

Determine Ways to Improve Patient Navigation Without Barriers

According to Horta Reis Da Silva (2023), the primary factors contributing to falls among older adults are associated with their living environments. The implementation of

fall assessments plays a critical role in enhancing safety measures, thereby supporting greater mobility in this population.

Reinforce Consistent Compliance Practices

Schoberer et al. (2021) offered guidance for administrators to support structural quality, improve effectiveness, and maintain proper fall prevention practices.

Facilitate Staff Ownership Related to Safety Protocols

Mark et al. (2024) and Parekh et al. (2024) discussed the significance of the role providers have in adult fall prevention with the use of fall initiatives such as the CDC's STEADI tool.

Empower Staff to Evaluate and Optimize Safety Tools and Environments

Dengiz et al. (2025) stressed the importance of determining environmental risks that lead to falls. Yamauchi and Shimoi (2025) encouraged the use of a bed-monitoring system to detect bed activity with the use of tags to predict bed separation as a fall prevention tool.

Strengthen Patient-Centered Care

Wang et al. (2025) emphasized assessing characteristics of falls such as intrinsic and extrinsic factors to implement the most effective fall prevention strategies. Dengiz et al. (2025) assessed which assessment tools are the most beneficial for identifying individual risks for elderly residents.

Customize Assessment and Care Plans for Individual Risk Factors

Luo et al. (2025) recommended enhancing fall risk assessment scales for older adults with cognitive impairment residing in nursing homes, placing particular emphasis on emotion-related factors.

Enhance Patients' Quality of Life

Gindoff and Moyer (2022) advised educating staff on the use of mobility programs to prevent falls and improve the quality of life for skilled nursing facility residents.

Interpretation of Findings

Improve Organizational Culture

Falls occur significantly more in long-term care facilities than in community dwellings for older adults, and 24.2% of these falls result in hospitalization (Miura & Kanoya, 2025). The high prevalence for falls in this setting places a vital need for strengthening organizational structure, which can be obtained several ways. Structural measures involve the characteristics of the space in which care occurs (Binder et al., 2020). The data obtained from EHRs provides guidance on fall risk factors such as medication use and the use of walking aids, however, many nursing homes do not have the infrastructure to optimize the use of these systems.

The use of traditional fall risk assessment tools such as the Morse Falls Scale and Peninsular Health Risk Assessment Tool are easy for staff to use and are cost effective (Binder et al., 2020). These tools can assess mobility limitations and cognitive impairments, but they may not identify daily fluctuations of patient health conditions; therefore, the use of more tailored tools may be necessary to capture the needs of skilled nursing facility patients. Environmental structural modifications for fall prevention include handrail installation, motion-sensitive lighting, non-slip flooring, and automated bed sensors (Binder et al., 2020).

Implementing a Supportive Leadership Model

Linnerud et al. (2023) suggested empowering leaders to implement a four-component fall prevention strategy, and Chowa (2021) advised that nursing directors must plan and implement fall prevention projects that include staff that spend the most time with patients. Additional structural enhancements focus on a leadership model that fosters staff support. This can be implemented with the use of a strategy with four components: empowering leaders to facilitate implementation, establishing implementation teams, tailoring dual competence improvement, and providing implementation support. Linnerud et al. found that leaders' frequent involvement and prioritization of fall prevention, as well as allocating dedicated time to these practices, positively affect fall prevention efforts.

Assess Protocols by Profit Model and Type

Another structural element to assess is the facility's profit model and classification. Hosseini (2024) noted that nearly 70% of American nursing homes operate as private, for-profit entities, and that such facilities tend to demonstrate poorer outcomes compared to their non-profit counterparts and that by enhancing time spent with patients can significantly improve outcomes. The average number of staffing hours per resident per day is a key factor, with nursing home residents typically receiving less intensive care compared to hospitalized patients. Increasing these hours through activities such as group games or initiatives that foster communication can contribute to positive enrichment (Hosseini, 2024).

Foster Teamwork and Collaboration

Hosseini (2024) identified that staff training, organizational commitment, the involvement of external consultants or advanced practice nurses, and an adequate number of certified nursing assistants contribute positively to fall prevention efforts. Additionally, Acosta et al. (2022) found that implementing patient stimulation strategies enhanced interprofessional communication and teamwork among staff members. The findings from the study by Acosta et al. demonstrated that participants in the patient simulation indicated training, post fall huddles, and fall risk assessments were generally beneficial. Nonetheless, some participants recommended extending the training to all team members on their facility floor, emphasizing that staff inclusivity is an essential component of the process. Several staff members mentioned feeling uneasy when observed by a lead nurse; however, they also found that this observation offered them more opportunities to receive knowledgeable, personalized feedback and contributed to improved retention of information.

Establish Protocols to Educate Staff About Fall Prevention

Colon-Emeric (2024) indicated that falls are caused by a range of intrinsic and extrinsic factors and advocated for the implementation of combined interventions as an effective approach. Additionally, Burgess et al. (2023) presented evidence that enhancing staff education not only reduces negative patient outcomes but also increases staff confidence in managing falls. Colon-Emeric further explained the significance of understanding that the cause of falls is multifactorial, which makes it necessary to carefully analyze and implement various interventions across facility domains. Staff should be educated and trained in multicomponent interventions, which can include the

implementation of exercise programs to improve leg strength and balance, vision interventions, deprescribing programs, and podiatry interventions, and fixed combinations of interventions provided to all residents.

Burgess et al. (2023) indicated that it is essential for facility staff to receive adequate support to enable optimal decision-making on behalf of their residents. Access to after-hours services is critical in reducing unnecessary Emergency Medical Service (EMS) transfers to the emergency department, particularly for the frail elderly population. Miura and Kanoya (2025) highlighted that effective organizational management and staff education play a crucial role in implementing fall prevention strategies in long-term care settings. They stressed the importance of thorough staff training, teamwork across disciplines, leadership support, and specialized instruction focused on identifying environmental risks and using monitoring technologies.

Determine Ways to Improve Patient Navigation Without Barriers

Residents of care homes are 10 times more likely to sustain a fall and a significant injury versus seniors living at home, because moving people from their familiar environments may cause confusion and increase their risks for falls. Horta Reis da Silva (2023) stated that administrators should focus on anticipating and preventing falls, instead of post fall management. Structural improvements such as multifactorial risk assessment tools should be utilized for all residents to include medication management, continence management, feet health monitoring, conditions that can contribute to fainting and loss of balance, assessing environmental safeness such as lighting, furniture, and flooring.

Gindoff and Moyer (2022) observed that simply avoiding falls does not guarantee a good quality of life. Encouraging residents to be mobile and engaged in meaningful activities is crucial, not just for fall prevention but also for managing chronic illnesses like cardiovascular disease and Type II diabetes. Consequently, removing physical obstacles for residents brings significant benefits. Barriers in skilled and long-term care facilities can be categorized as residential, environmental, or organizational. These obstacles may arise from structural factors such as insufficient staffing, limited funding, and a lack of support for program development. Gindoff and Moyer concluded that administrators can implement restorative programs by increasing resident activities that remain feasible even in the presence of such challenges.

Facilitate Staff Ownership Related to Safety Protocols

Mark et al. (2024) determined that healthcare providers play a crucial role in guiding their elderly patients to take necessary actions to prevent falls, which includes discussions about patient's perceptions on falling and managing and reducing medication use. This can be achieved through improving collaboration with the patient's pharmacists and providers. Parekh et al. (2024) reported that the primary fall prevention intervention that revealed promising results included the use of structured protocols. These protocols demonstrated a reduction in unnecessary hospital transfers and hospitalizations due to falls. According to Parekh et al., no single profession is exclusively tasked with post-fall interventions. However, nursing staff in both long-term care facilities and hospitals are mainly responsible for these interventions, often working alongside mental health clinicians, emergency medical services, trauma staff, and physicians. Post fall interventions that incorporate strong collaboration among multidisciplinary teams and the

use of huddles can improve patient outcomes with adequate support of nursing staff in the decision-making processes.

Strengthening IDT Communication

Albasha et al. (2023a) stated that staff education is a top strategy for fall prevention in skilled nursing and long-term care facilities, mentioning that staff training should be ongoing, and focused on new staff and being skill-focused and staff should be aware of fall risk factors. This study also supports improving training by incorporating staff communication and peer learning, such as discussing lessons learned and possible improvements for fall prevention. Staffing consistency with specialist input from physical and occupational therapists, and all disciplines taking responsibility for proactively communicating with tools such as audits, feedback, and fall champions, can lead to falls reduction (Albasha et al., 2023b).

Reinforce Consistent Compliance Practices

Gindoff and Moyer (2022) found that staff at long-term care facilities were concerned about their ability to manage falls due to insufficient knowledge, skills, staffing levels, and heavy workloads; these inconsistencies can affect their capacity to deliver effective fall prevention care. The study also highlighted the importance of consistent practices across facility departments, with staff noting the need to enhance both the implementation and overall efforts for fall prevention at their sites. Schoberer et al. (2021) recommended ensuring structural quality care facilities by training nursing staff on guidelines, setting clear aims and criteria, involving relevant personnel, and fostering open-mindedness. Regular assessment of these processes is advised.

Facilitate Frequent, Brief, and Concise Educational Training

The incorporation of fall prevention in daily routines was mentioned as being one of the more practical approaches according to Miura and Kanoya (2025), to include rapid-cycle audits, feedback, the use of fall champions and leaders and daily informal communication such as safety pauses and staff collaboration. Unlike lengthy, formal meeting and educational sessions used to identify residents with high risks of falling, brief meetings based on real-life scenarios encountered in units were determined to be easier to integrate into daily routines and keep staff engaged and motivated (Albasha et al., 2024).

Albasha et al. (2023b) and Miura and Kanoya (2025) highlighted that the successful implementation of fall prevention interventions requires a comprehensive strategy, incorporating audits, feedback, educational sessions, and approaches specifically tailored to meet residents' clinical needs. These strategies are designed to assist staff in overcoming barriers within the care environment. The way such interventions are executed significantly influences their overall efficacy.

Empower Staff to Evaluate and Optimize Safety Tools and Environments

Denzig et al. (2025) mentioned that falls among the elderly are due to multifactorial risk factors, including individual, health-related, psychosocial, and environmental factors, therefore determining the most reliable tools to help predict risks is detrimental for fall prevention. Denzig et al. also mentioned that there is still a need for predictability of the most accurate tools in various healthcare settings.

An additional process to evaluate is bed monitoring for residents in nursing and long-term care facilities, as 85.5% of falls occurred without assistance or supervision.

Yamauchi and Shimoi (2023) introduced a bed-monitoring system utilizing radio frequency identification (RFID) technology to facilitate non-contact measurement for detecting resident posture and predicting potential out-of-bed falls, thereby aiding in the management of fall risks. Findings from their research demonstrated that employing a greater number of RFID tags enhances the reliability of predictions concerning when a resident may fall out of bed.

Strengthening Patient-Centered Care

Wang et al. (2025) noted that injuries sustained due to falls in long-term care facilities can lead to cognitive and physiological changes which have a negative impact on the quality of life and is costly. To enhance outcomes of residents of skilled nursing facilities, early identification of residents with the highest risk factors of falls is vital to implement preventative strategies. The results of this study revealed that falls most frequently took place between 4:00 a.m. and 8:00 a.m., often occurring on flat surfaces while residents were transitioning between sitting and standing, toileting, getting out of bed, or walking. This data is useful as well as the data from Denzig et al. (2025) to support the need for a multidisciplinary approach versus a single assessment method for fall risk evaluation. When properly implemented by staff, skilled nursing administrators can achieve better resident outcomes and quality of life. Denzig et al. highlighted the need to assess psychosocial factors like fear of falling, which impacts residents' confidence, autonomy, and the effectiveness of preventive strategies. This study offered guidance on using the Modified Falls Efficacy Scale (MFES) to understand fear of falling in healthcare settings.

Tailor Assessments and Care Plans for Individual Risk Factors

Evaluating intrinsic risk factors, such as cognitive decline, is essential for enhancing outcomes among residents. Luo et al. (2025) reported that more than 25% of older adults, particularly those aged 65 and above, experience falls, making this population the leading cause of injury-related mortality. Accordingly, there is a critical need to refine fall risk assessment tools for nursing home environments to enable the development of targeted evaluation methods. The findings of this study demonstrated that the Fall Risk Assessment Scale-for Nursing Homes (FRAS-NH) was effective in measuring fall risk in older adults with cognitive impairment, as physiological and behavioral indicators offer greater predictive value for fall risk within this demographic (Luo et al., 2025).

Enhance the Quality of Life

Wallace and Vannes (2024) noted that the most beneficial approach for falls reduction among the elderly is to implement screening protocols that incorporate self-reported responses, this can result in changes in the person's behaviors and their perceived risk for falls. This study used the health belief model (HBM), which involves changing behaviors related to residents' health when experiencing a personal risk. The use of comprehensive multiple screenings that include a physical examination, medical history, extensive screening tools, and functional fitness tests for gait and balance can reduce the number of falls and injuries sustained by residents. According to Gindoff and Moyer (2022), enhancing the quality of life for residents can be accomplished by reducing sedentary behavior. This involves creating exercise guidelines tailored to specific groups, increasing resident motivation with a focus on promoting activity, raising

staff awareness, implementing strategies to break up periods of inactivity, avoiding the use of restraints, and improving the environment with creative approaches that are both motivating and enjoyable for residents.

Conclusion

In this section, the Donabedian model is used as the framework to illustrate the essential function of quality processes in mitigating fall risks within skilled nursing facilities and advancing quality improvement initiatives (Yang et al., 2025). The themes and subthemes outlined in this section (see Appendix E) offer comprehensive insights into how these concepts, as identified through a literature review, may be relevant for skilled nursing facility administrators and staff in preventing falls and fall-related injuries. Falls are a persistent concern among elderly individuals at high risk; however, identifying the contributing risk factors enables administrators to implement strategies aimed at reducing fall prevalence and mitigating associated injuries, while preserving residents' confidence and independence. Many researchers have noted that one single practice is not the solution, rather incorporating many tools and tailoring risk assessments on an individual need is more advantageous. A robust structure with defined roles and responsibilities with generous support from leadership, assessing resident's intrinsic and extrinsic risk factors, and consistency in application can enhance the quality of life for residents.

Part 4: Recommendation for Professional Practice and Implications for Social Change

This section incorporates the best practices to reduce falls in skilled nursing facilities in Virginia. Albasha et al. (2023b) found that there are many prevention interventions, single and multifactorial, that have been successful in falls reduction in long-term care facilities, in addition to multifactorial risk assessments. Some of these best practices include supportive administration, staff education, fall risk screening assessment tools, frequent and brief training, meetings, effective interdisciplinary team communication, post fall reassessments, patient and caregiver education, and continuous monitoring of environmental safety.

Thematic Map and Donabedian Framework

The fall prevention recommendations presented in this integrative review are based on the Donabedian model, a framework established in 1966 to improve health care quality (Donabedian, 1966). This model establishes the foundation for comprehensive analysis aimed at enhancing patient outcomes. It has served as a framework for guiding structural and procedural modifications designed to optimize high-quality clinical results, reduce healthcare costs, and increase patient satisfaction (Binder et al., 2020). The recommendations in this section are supported by the Donabedian framework, highlighting leadership in staffing and continual education as a means to improve the lives of seniors and enhance quality of life.

Recommendations for Professional Practice

Recommendation 1: Establish comprehensive employee training programs and patient education, ensuring leadership is actively involved in the planning and implementation.

According to the Albasha et al. (2024) study, maintaining and increasing staffing levels, ensuring appropriate staff-to-resident ratios, and having staff with appropriate skill mix were all key factors that administrators can implement to structurally reduce falls in skilled nursing facilities. Education programs in nursing homes play a crucial role in equipping staff with the knowledge required to perform assessments and select appropriate procedures and tools, thereby enhancing patient satisfaction and mobility.

The Donabedian framework, which encompasses structure, process, and outcome, is closely aligned with the importance of staff education (Donabedian, 1988; Saheb & Saheb, 2025). This model evaluates the quality of nursing homes by examining factors such as the structure of staffing, policy implementation, and educational development. The process is coordinated with the implementation of educational initiatives across staff programs, ensuring that outcomes enable staff members to identify and utilize the most effective processes and educational strategies when working with patients. Saheb and Saheb (2025) further explained that various outcomes provide staff with a structured framework that clearly illustrates the connection between resources, actions, and results in supporting high-quality care in long-term settings.

Nursing home fall prevention education programs are comprehensive in nature, encompassing staff training, resident and family education, and systematic modifications. These initiatives utilize a variety of educational resources to address patient needs throughout the entire continuum of care, from admission and assessment of care requirements to discharge planning for transition to home. Educational strategies should be tailored to the patient's stage of care and the complexity of their treatment.

Additionally, staff must assess and consider the patient's mental status to ensure that care is appropriate and effective.

Staff and patient education programs in a nursing home can be implemented using several strategies. These initiatives transition from reactive measures to proactive prevention, equipping staff and residents with essential knowledge and resources to foster safer environments. Such efforts substantially lower the risk of falls and enhance overall well-being within skilled nursing facilities.

The following processes are used to educate both staff members and patients:

- Staff training: In-services for new/current staff covering dementia awareness, risk factors, problem-solving, and specific interventions. Auditing and adding a visual guide can help staff understand and meet fall prevention guidelines, supporting greater accountability.
- Multidisciplinary approach: Involving nurses, therapists, aides, and even families in assessment and prevention. It is vital for administrators and facility leaders to promote creativity among staff, share quality metrics, and projects.
- Resident- centered care: Addressing individual needs, including managing pain, proper positioning, meeting personal needs (toileting), and ensuring items are within reach (the 4P's).
- Environmental safety: Identifying and modifying hazards like poor lighting, cluttered pathways, and ensuring grab bars, raised toilet seats, and non-slip treads. According to the findings of Albasha et al. (2024), one recommendation is to implement an awareness-raising tool that utilizes color-coded days to indicate when residents have experienced falls.

- Data and monitoring: Tracking falls, conducting root cause analysis, and using quality improvement (QAPI) to refine strategies. Administrators and clinical leaders can evaluate any noted trends, such as when and where falls are most likely to occur.
- CDC STEADI: Adapted for long-term care, providing a comprehensive framework.
- AHRQ on-time falls prevention: Uses EMRs to help teams identify at-risk residents and implement prevention.
- "Falling LEAF" program: Uses visual cues for staff to recognize high-risk patients, especially during toileting.
- Healthy steps for older adults (HSOA): Community-based workshops to boost fall prevention knowledge.

Recommendation 2: Evaluate and use fall risk devices that are customized for each patient, taking into account individual strengths through strategies and tools that supplement staff care.

The Donabedian framework advances patient safety and quality by incorporating fall risk devices as complements to education and assessment initiatives in nursing homes (Donabedian, 1988; Yang et al, 2025). This integration of appropriate devices strengthens fall prevention strategies while upholding patient autonomy. The structure aspect requires careful screening of the devices to ensure safety and quality management (Felix et al., 2023). The process would be the use of the devices after staff are thoroughly educated about the use and safety of the device. The outcome includes a diligent and

comprehensive evaluation of the device to confirm its safety and suitability for use (Donabedian, 1988; Yang et al, 2025).

Falling can be an underlining indicator of health issues or indicative of the need for assistance, such as vision aids. The multidisciplinary team, gerontologists, nurses, occupational, physical therapists, and social workers should all be actively involved to determine patients fall risks. Horta Reis Da Silva (2023) suggested the use of multifactorial risk assessment tools to include the following: management of medication, management of continence, monitoring of foot health, palpitations, blackouts, heart conditions, vision and hearing, an assessment of safety of the environment, nutritional and hydration status assessment, and the evaluation of bone health. Miura and Kanoya (2025) found that many nursing homes do not conduct fall risk assessments that these assessments are necessary and should be customized to the specific characteristics of each long-term care facility.

The following are examples of various categories of electronic devices:

- The use of EHR-based risk assessment models and datasets can be beneficial; this relies on the accuracy of the data entered the interpretation of data.
- Digital devices, such as wearable devices that assess mobility and balance such as spatiotemporal gait analysis.
- G-STRIDE inertial sensors may be used to assess fall risks.
- Additional digital devices that may be used include Smart Belt, which can monitor movement patterns and deploy airbags to reduce injuries sustained during falls.

- Smart phone-based gait analysis systems such as mVEGAS, which can identify mobility impairments.
- Activity trackers can also be implemented in facilities where there are limited resources, as they are cost-effective and can be used to monitor and track daily activities and advise of fall-risk indicators.

Recommendation 3: Use patient assessment tools to prioritize fall prevention and enhance both functional and psychosocial health, ultimately helping patients achieve a better quality of life.

The Donabedian framework advances patient and quality safety by incorporating patient fall assessments to support fall prevention initiatives and foster patient independence (Guzmán-Leguel & Rodríguez-Lara, 2025). The structure aspect would ensure there are policies in place for the assessment of patients throughout their nursing home stay. Guzmán-Leguel and Rodríguez-Lara (2025) further highlighted that this process involves the implementation of multiple assessment instruments to ensure the delivery of appropriate patient-centered care. Ultimately, the outcome consists of continuous monitoring and management to verify the proper application of screening tools.

Daily tasks pose a risk for falls for the elderly and the fear of falling can create lack of balance, reduced socialization, loss of independence, deconditioning from inactivity, which results in a diminished quality of life. Nearly 20% to 39% of the elderly have a fear of falling and that fear increases to 40% to 73% for those who have sustained falls previously (Wallace & Vannes, 2024). Mark et al. (2024) found that health promotion can bring attention to evidence-based fall prevention strategies that enable the

elderly to improve their quality of life. Therefore, it is crucial to choose appropriate screening tools to improve safety, encourage independence, and prepare patients for discharge to their homes or a lower level of care.

Below are fall assessment screening tools for evaluating patients during different stages of nursing home placement.

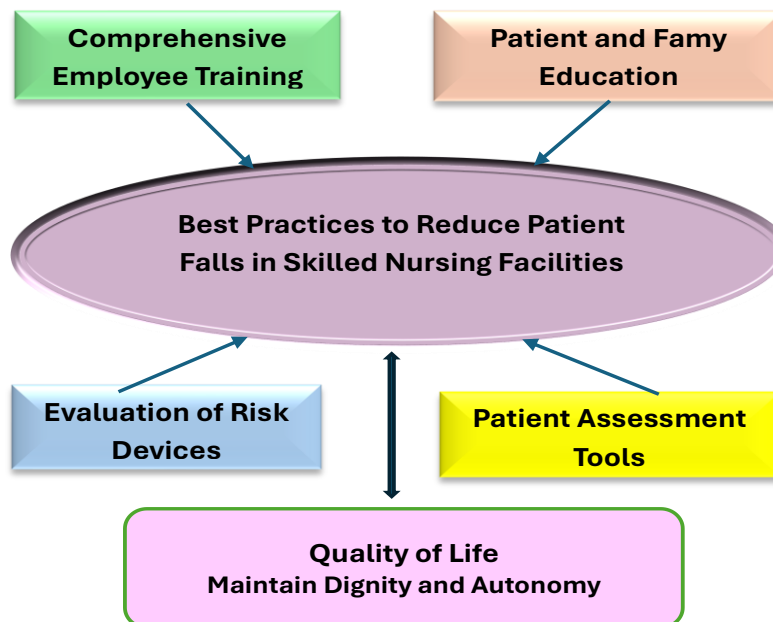
- Ozen et al. (2023) determined TUG (Timed Up and Go), TBGA (Tinetti Balance and Gait Assessment, and MMSE (Mini-Mental State Examination) were beneficial for assessing the fear of falls and the number of falls sustained.
- Wallace and Vonnies (2024) and Mark et al. (2024) recommended using the STEADI (Stopping Elderly Accidents, Deaths, and Injuries) risk assessment, as it has been shown to reduce costs linked to falls, decrease fall-related hospital admissions, and help older adults maintain their independence. The STEADI risk score encompasses three important elements; screen, assess, and intervene. This initiative encourages health care providers to include fall prevention into clinical practice by providing them with an array of resources and tools. Exercise-based interventions, such as tai chi, gait, and balance training were also successful at reducing fall-related injuries.
- The Falls Efficacy Scale-International (FES-I) assessment tool uses 16 daily living activities with self-reporting perceptions related to the perception of falling.
- The use of the Fall Risk Questionnaire (FRQ) and the Timed Up and Go (TUG) are vital in determining personalized interventions.

- AHRQ's On-Time or CDC's STEADI, focusing on risk factors (environment, resident health, medications) and strategies like the 4P's (Pain, Position, Placement, Personal Needs) for a team approach to reducing falls and improving resident safety.
- Clinical interventions include environmental and vision assessments, calcium, and vitamin D supplementation.
- Gindoff and Moyer (2022) recommended a socialization assessment to increase group activities and staff support.
- Administrators and nursing leadership should develop an assessment tool that regularly screens the facility's environment for any space constraints, lighting issues, and surface types that can increase fall risks.
- Assessment tools to determine levels of independence should be done weekly to determine whether patient strength and independence are increasing, stable, or decreasing and provide follow-up actions to reduce sedentary behavior and establish guidelines for exercise.

Figure 2 illustrates the recommendations to reduce patient falls.

Figure 2

Illustration of Recommendations to Reduce Patient Falls



Implications for Social Change and Social Determinants of Health

The findings discussed in this integrative review provide significant implications for social change, specifically when addressing the importance of improving the quality of life for residents in skilled nursing facilities. Enhancing the quality of life for residents requires interventions that promote autonomy, support independence, and reduce social isolation. This aligns with Gindoff and Moyer's (2022) study, which emphasized that optimal functioning relies on meeting three core domains: autonomy, competence, and relatedness. This highlights the need for environments that empower residents, their capabilities, and foster meaningful connections. The implications for social change involve system-level social change, resident-centered empowerment, care quality and

safety culture, cognitive and emotional well-being, social and environmental equity, and family and community integration.

System-Level Social Change

System-level social change incorporates advocating for improved staffing ratios, as inadequacies in staffing are correlated to fall rates, resident engagement, and rehabilitation success. Encouraging culturally responsive care enforces the use of tailored fall prevention education and interventions to individual needs. Also, supporting smoother transitions of care can enhance communication between hospitals, skilled nursing facilities, and primary care to reduce medication errors and lower fall risks upon discharge.

Resident-Centered Empowerment

Resident-centered empowerment involves improving shared decision-making by encouraging residents and their families to participate in care planning to improve confidence, safety, and satisfaction of care. Many residents at skilled nursing facilities and similar settings spend 75% of their day in sedentary activity, reducing this can improve chronic conditions such as cardiovascular diseases and Type II Diabetes (Gindoff & Moyer, 2022). Health literacy also plays a significant role in resident empowerment and self-advocacy, when residents are aware of fall risks, medications and mobility.

Quality of Care and Safety Culture

Falls in nursing homes and similar settings cause significant morbidity and mortality, although most falls do not result in serious injury but can cause the patient to lose confidence in addition to other complications such as pressure damage, pneumonia,

and rhabdomyolysis (Burgess et al., 2023). The quality of care and safety culture promotes staff and residents reporting falls or near-misses, to provide facility administrators with opportunities to learn and improve versus assigning blame. Increasing interdisciplinary collaboration is also vital to providing a holistic approach to improving fall-prevention guidelines.

Cognitive and Emotional Well-Being

Residents with physiological and behavioral factors are more susceptible to fall risk in the elderly population with cognitive impairment (Luo et al., 2025). Cognitive and emotional well-being involves providing residents with activities that maintain cognitive function while lowering the incidence of falls caused by confusion. Providing residents with psychological support, addresses anxiety and trauma experienced after a fall and helps residents regain confidence to improve their mobility.

Social and Environmental Equity

Providing residents with social and environmental equity incorporates ensuring that they have equitable access to mobility aids and technology, to the best ability of available funding and resources. The importance of environmental and safety interventions identified by Miura and Kanoya (2025) suggested that fall prevention starts with physical environment itself. Administrators can operationalize these findings by enforcing comprehensive environmental assessments that verify safe flooring, proper lighting, and accessible layouts across all units.

Family and Community Integration

Family and community integration improves the quality of life for residents, if their families understand fall-prevention strategies, they can reinforce these strategies

during visits and transitions. Providing residents with access to volunteers within their community can provide companionship, assistance with mobility, and support exercise groups such as Bingosize, which expand social networks and reduce staff burden.

Limitations

There are a few limitations to note for this integrative review. First, the scope of review was limited to primarily skilled nursing facilities and similar settings. Skilled nursing facilities can vary depending on staffing ratios, resident acuity, resources, and organizational culture. Second, heterogeneity of interventions may influence outcomes such as fall risk assessment tools, environmental changes, staffing structures, technology applications, and medication review processes may differ substantially based on the facility type and the evidence base used. Third, the potential for reviewer bias based on decisions regarding which 25 studies were “high quality” enough to include in the study may reflect subjective judgments.

Conclusion

Prioritizing the reduction of falls in skilled nursing facilities requires a comprehensive, system-wide commitment to transforming both practice and culture. The purpose and review question for this integrative review is centered on determining the most effective strategies and best practices that healthcare administrators can utilize to reduce patient falls and injuries in skilled nursing facilities and increase patient satisfaction. After a thorough search of the literature, 25 articles were chosen to further evaluate using the Johns Hopkins Review form, resulting in additional analysis and development of six main themes and eight subthemes (See Appendix C and Appendix D).

The themes focused on leadership support, staff training, patient education, and fall prevention. The final three recommendations are as follows:

- Establish comprehensive employee training programs and patient education, ensuring leadership is actively involved in the planning and implementation.
- Evaluate and use fall risk devices that are customized for each patient, taking into account individual strengths through strategies and tools that supplement staff care.
- Use patient assessment tools to prioritize fall prevention can enhance both functional and psychosocial health, ultimately helping patients achieve a better quality of life.

The recommendations demonstrate that improving organizational culture through supportive leadership establishes the foundation for safe environments, while fostering teamwork and strengthening interdisciplinary communication ensures that fall-prevention efforts are coordinated, consistent, and responsive to the needs of residents. Establishing clear protocols for staff education which are delivered through frequent, concise, and targeted staff training and education, reinforces competency and keeps fall prevention strategies at the forefront of daily practice.

Nursing homes should enhance patient navigation by systematically identifying and addressing barriers arising from facility design, financial models, or inconsistent compliance practices, all of which are pertinent to the Donabedian model of quality improvement (Guzmán-Leguel & Rodríguez-Lara, 2025). When organizations employ Donabedian's quality framework, focusing on structure, process, and outcome, they can regularly review their protocols and strengthen compliance. This approach helps establish

reliable, safe settings that reduce the risk of falls (Donabedian, 1966; Saheb & Saheb, 2024). Strengthening patient-centered care further enhances these efforts by tailoring assessments and care plans to each resident's unique risk factors and by prioritizing interventions that support autonomy, independence, and the overall quality of life.

In conclusion, cultivating staff ownership of safety protocols empowers frontline caregivers to evaluate and optimize safety tools, environmental hazards, and participate actively in quality improvement. When staff feel responsible for and vested in fall-prevention outcomes, safety becomes a value instead of a task. These recommendations illustrate that fall prevention is not achieved through isolated interventions, but through an integrative approach that aligns with collaboration of staff and the support of leadership. By embracing these interconnected strategies, skilled nursing facilities can create safer environments, strengthen well-being, and provide a culture of excellence that improves their residents' quality of life.

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Appendix A: DHA Practice-Based Problem Literature Review Matrix

Author/ date	Theoretical / conceptual framework	Research question(s)/ hypotheses	Methodology	Analysis & results	Conclusions	Empirical research? (Yes or No)
Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2023).	This study used a conceptual framework .	The hypothesis for this study is “To explore long term care facilities staff’s current practices around falls prevention, and their suggested solutions for better falls prevention.”	The methodology used in this study was a descriptive cross-sectional study that took place in 13 LTCF sites, that used a broad range of provider types and facility sizes.	Content analysis was used to analyze responses, mapping categories and subcategories to the refined theoretical domains framework (TDF) to an existing fall prevention guideline.	Implications for future research include the possible need for a study with more representation of general practitioners, health and social care professionals. Also, the need to get more responses to have a broader source of data.	Yes
Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2024).	This study used a conceptual framework using a qualitative study design.	The hypothesis for this study is: “Understanding barriers will enable staff of long-term care facilities to	The methodology used was a qualitative study that involved four long-term care	Six main themes were discovered: reflecting factors that influenced fall prevention: a need for adequate staff and appropriate skill mix; fall	The conclusion of this study was that long-term care staff identified different approaches to prevent falls in	Yes

		better assess fall risks and implement fall prevention activities.”	facilities with various provider types and sizes.	policy; documentation and leadership; equipment and safe environments; person-centered care; staff knowledge; skills and awareness in falls prevention; and staff communication and collaborative working.	the long-term care facility setting, as part of the usual care versus formal meetings and training sessions.	
Boyce, R.D., Kravchenko, O.V., Perera, S., Karp, J.F., Kane-Gill, S. L., Reynolds, C.F., Albert, S.M., & Handler, S.M. (2022).	This study used a conceptual framework .	The hypothesis of this study is “To develop and validate a model to predict the risk of experiencing a fall for nursing home residents using data that is available electronically at numerous facilities in the United States.”	The methodology used in this study was a prediction model that was built and tested using two extracts of data from 2011-2013 and 2016-2018 from the long-term care minimum data set	The analysis of this study included a hybrid Classification and Regression Tree (CART) logistic model. The results of the combined dataset consisted of 3985 residents with a mean age of 77 years and 64% were female.	The conclusion of the study indicated that the novel hybrid CART-logit algorithm is an advance over the 22 fall risk assessment tools that have been used in the past and evaluated in the nursing home setting.	Yes

			(MDS) combined with drug data from five skilled nursing facilities.			
Burgess, A. J., Clee, D., Prichburg, A., Burberry, D. J., Keen, L, & Davies, E. A. (2023).	Improving staff education by using the volume of emergency calls to deliver better patient experience and system efficiency.	Can improving staff education, the volume of emergency calls, hospital conveyance, reduce adverse patient outcomes?	Quantitative methodology using survey questions inclusive of ambulance services, split into multiple phases.	The study proved the importance of improving fall-reduction education among staff.	Falls, specifically in nursing homes, continue to be a major burden on emergency services with opportunities to improve patient outcomes and experiences by improving education, adverse outcomes for optimal recovery due to falls can be obtained.	Yes
Chowa, L. (2021).	This study used a conceptual framework .	The hypothesis for this study is: “nurse led multifactorial intervention on fall prevention have	The methodology used was a pre-post intervention study conducted in	The analysis included a multifactorial intervention with the following four components “fall risk assessment,	Conclusion of this study indicated the value of multifactorial intervention. The data captured	Yes

		significant positive effects.”	a local agency of a healthcare organization for hospice patients in California. This intervention consisted of four components and was conducted between 2017 to 2019.	post-fall huddle session, universal fall precautions education, and the 5 Ps to reduce falls for elderly hospice patients.” Results yielded a reduction in fall rates for hospice patients with the use of the multifactorial intervention.	supports the significance of this intervention.	
Colón-Emeric, C. S., McDermott, C. L., Lee, D. S., & Berry, S. D. (2024).	This study used a conceptual framework using various articles from several databases and clinical practice guidelines and the	The hypothesis for this study was: “The causes for falls may be multifactorial and require careful assessment and intervention across domains, this study will better identify the best	The methodology used in this study was various articles for each category of fall prevention with a meta-analysis of studies held in community	Analysis of this study included: The study focused on high-quality prospective studies, large pragmatic RCTs and systematic reviews and meta-analyses of RCT efficacy trials. Fall rate was abstracted from intervention meta-analyses, risk of	The conclusion of this study indicated that improving leg strength and balance by using functional exercise can prevent falls for average risk to high-risk populations. The use of systematic clinical assessments that	Yes

	CDC Compendium of Fall Prevention Interventions.	practices for risk stratification, clinical assessment, and the selection of risk reduction interventions.”	dwelling older adults and randomized clinical trials, using the most recent meta-analysis.	falls, and risk of fall-related injuries.	can be modified by risks can be beneficial in reducing fall rates for individuals that are at a high risk for falling.	
Colón-Emeric, C. S., McDermott, C. L., Lee, D. S., & Berry, S. D. (2024).	This study used a conceptual framework .	The research question for this study was: “To investigate if productivity requirements for OT practitioners in skilled nursing facilities impact the quality care measures including percentages of falls, development of pressure injuries, and hospital readmissions?”	The methodology for this study used a 14-question survey created using Google Forms, which included two open-ended questions.	The analysis of this study used patient quality care measures from each skilled nursing facility using the CMS Nursing Home Compare Tool. The results of this study yielded that 89% of the 135 participants surveyed agreed that high productivity requirements negatively impact patient care.	The conclusion of This study exhibits the high productivity requirements continue to be an expectation of OT practitioners at skilled nursing facilities. Which increase burn-out, negatively impacts health, and results in poor organizational commitment.	Yes

<p>Ebrahim, N., Ras, J., November, R., & Leach, L. (2025).</p>	<p>A conceptual framework was used for this study with a cross-sectional design of 258 men and women.</p>	<p>The research question was: “What are common characteristics and or behaviors that contribute to falls among older adults living in long-term care facilities?”</p>	<p>A cross-sectional study was conducted by testing participants on an individual basis who resided in a long-term care facility adhering to a WHO COVID-19 protocol. A questionnaire was used to obtain the participants’ sociodemographic information and physical measurements such as age, gender, etc.</p>	<p>The analysis resulted from data used in IBM SPSS Statistics Results: females had a higher prevalence of falls, with slipping/tripping being the primary cause. Dizziness was indicated as a primary cause for males falling. Other factors that contributed to falls were poor vision, unsafe transfers, and environmental challenges.</p>	<p>Conclusions from this study revealed that falls were significantly associated with behaviors such as agitation and confusion. This study revealed that participants that had a lower educational level and who were single or widowed, had a higher fall prevalence. Other factors that contributed to falls were the use of anti-depressant and anti-diabetic medications.</p>	<p>Yes</p>
<p>Gindoff, J., & Moyer, H. (2022).</p>	<p>This study used a conceptual</p>	<p>The hypothesis for this study is: “Mobility in long-term care</p>	<p>The methodology used in this study had</p>	<p>The analysis of this study indicated that mobility programs reduce fall risks, but</p>	<p>The study concludes with: by changing attitudes toward</p>	<p>Yes</p>

	framework	facilities is necessary to improve the residents' quality of life and also to reduce sedentary behavior.”	implications of Donabedian Model, as it included structure, process, and outcomes.	results are mixed and limited due to the heterogeneous population in long-term care facilities.	mobility and fall prevention to enhance residents' ability to participate in meaningful activities will improve their quality of life.	
Horta Reis Da Silva, T. (2023).	Donabedian Model- this article provides more of a structure-process outcome using a multifactorial falls risk assessment tool and actions to take.	Does carrying out multifactorial falls risk reduce risks when possible?	Methodology used was identifying risk factors for falls using a risk screen assessment. These factors were identified based on people living in long-term care homes.	The results of this study indicated that collecting and analyzing falls data can assist with anticipating and preventing future falls. More emphasis needs to be put on policymakers and healthcare providers to make necessary plans for fall interventions. This can include improving policies on better living environments for the elderly.	A multifactorial risk assessment tools should be used on all residents of long-term care homes. All falls in the care homes and community should be recorded and analyzed to identify the causes of the falls.	Yes
Hosseini, H. (2024).	This study used a conceptual	The hypothesis for this study was: “Tailoring	The methodology used for this	The analysis of this study included fall-related risk factors	The conclusion of this study indicated that	Yes

	framework	falls prevention and response plans to nursing home profit model and ownership type would greatly improve the effectiveness of general plans.”	study included using qualitative and quantitative data collected from government databases and web surveys.	that were scored and used to build multivariate logistic regression models to predict falls rates. These results indicated a significant correlation between facility ownership and profit type and fall rates outcomes.	falls preventions plans targeted to home types to produce improved falls outcomes as predicted by the models.	
Kuhnnow, J., Hoben, M., Weeks, L.E., Barber, B., & Estabrooks, C.A. (2022).	This study used a conceptual framework with data from a sample of Canadian long-term care homes from 2011-2017.	The hypothesis for this study was: “By analyzing the effect of various factors on falls in older adults living in LTC homes across the Canadian provinces of Alberta, British Columbia, and Manitoba will provide evidence to support additional	The methodology in this study used was a retrospective cohort study using data from a Translating Research in Elder Care (TREC) program. The data collected was from four waves from 2007-2017.	The analysis of this study included the use of the statistical package for Social Sciences version for all the quantitative data analysis.	The conclusion from this study indicated that individual physical ability represented the largest group of independent contributors to falls. Also, residents who sustain fractures or any changes in behavior, mobility, or activities of daily living have an increased risk of falling.	Yes

		correlation between factors to improve knowledge and prevent falls in long term care homes.				
Linnerud, S., Kvael, L.A.H., Graverholt, B., Idland, G., Taraldsen, K., & Brovold, T. (2023).	This study used a conceptual framework .	The hypothesis of this study is to co-create an implementation strategy designed to increase the uptake of fall prevention evidence in home care services.	The methodology of this study used a multi-method qualitative co-creation process that used a combination of workshops, focus group interviews, and individual interviews. The participants of this study included researchers, health providers,	The analysis of this study included organization of the co-creation process as a five-step process with three workshops, two focus group interviews, and four individual interviews. The results yielded an implementation strategy with four components: “empower leaders to facilitate implementation, establish implementation teams, tailor dual competence improvement, and provide	This study concluded that empowering leaders to facilitate implementation encourages the significance of what leadership pays attention to, priority of resources and time used on fall prevention.	Yes

			and services users.	implementation support.”		
Mark, J.A., Henry, A., Bergen, G., Moreland, B., & Dobash, D. (2024).	This study was conducted using a conceptual framework .	The hypothesis of this study is: “Understanding the Stage of Change for three fall prevention strategies, determining strategies that older adults use, and understanding which characteristics relate to readiness to take action, can reduce fall risk for older adults.	The methodology used in this study were surveys that assessed fall risk conducted by Porter Novelli Services.	Analysis for this study used participants that were randomly selected for the study and the analysis was restricted to respondents aged 65 and up. Demographic questions and four-fall-related questions were asked in the survey. Response categories with less than 20 observations were combined for reliable variables. Crude RRs and aRRs with 95% CI were obtained using a Poisson regression model for this study.	Conclusions for this study indicated females outnumbered males by 10%. 60% of respondents of the survey disagreed that there is nothing that can be done to prevent falls. Half of the respondents were at risk of falling based on STEADI’s 3-Key Fall Risk Screening Questions.	Yes
Miura, T., & Kanoya, Y. (2025).	This study was conducted with a	The research question/hypotheses were: “What are	The methodology used in this study was a	The analysis of this study indicated that conventional approaches alone	Conclusions for this study indicate that the lack of	Yes

	conceptual framework .	practical indicators that have been previously missed in fall risk assessments?” “What is the consistent evidence that contributes to falls in long-term care facilities, specifically those serving highly dependent older adults?”	narrative review using previous studies from 2019 to 2024 on fall risk assessment and prevention methods in nursing homes. The studies used were peer-reviewed academic articles.	may not be sufficient as fall prevention strategies.	standardized indicators and large-scale databases to verify risks, continue to be a significant barrier in reducing falls in the future. Current evidence indicates that exercise interventions are effective, however there are other interventions that could also be used.	
Özen, B., Ceyhan, Ö., Şimşek, N., Uzdil, N., & Akın, S. (2023).	This study used a conceptual framework .	The research question for this study was: “What are the determining factors for falls, fear of falling, and risk factors for falling in older adults living in	The methodology used in this study was data collected using introductory form, fall behavioral scale for older people,	The data collected was from older adults 65 and up who were able to communicate, had no physical walking issues, and did not make any changes in medications used by the elderly person during the study-were included	The conclusion of this study revealed that the fear of falls and the number of falls were high in the older adults living in the institution.	Yes

		nursing homes?”	standardized mini-mental state examination (MMSE), timed up and go test (TUG) and Tinetti Balance and Gait Assessment (TBGA).	in the study. The results of the study indicated that 41.6% of the older adults fell at least once in the recent year, 31% of them fell while walking in and out of the building, and they fell mostly due to tripping.		
Roderman, N., Wilcox, S., & Lang, C. (2024).	This study uses a conceptual framework .	Can falls be reduced with the implementation of a non-punitive culture around fall reporting?	Quasi-experimental , pre-post design.	After the implementation of the non-punitive program, results indicated a significant decrease in average fall rates per 1000 patient days from pre-intervention to post-intervention, resulting in cost savings.	Preventative interventions have proven effective in addition non-punitive leadership, an IDT, and continuous follow-up education.	Yes
Schoberer, D., Breimaier, H.E., Zuschnegg, J., Findling, T., Schaffer, S., & Archan, T. (2022).	To prevent/avoid falls and their consequences and to	What are risk factors for falls, to reduce falls, and avoid the possible	Delphi method with the use of Agree II tool to ensure	There are currently no available fall prevention international guidelines within the past five years	Fall prevention is very important in nursing homes and hospitals. The guidelines used in the study	Yes

	provide nurses with an overview of all relevant research literature on fall prevention, and a practice guideline on fall prevention in older adults was developed.	consequences of falls?	guideline quality.	of this study that is available for free. Experts recommend that every older adult be assessed for risks for falling, yet the use of an assessment tool was not recommended. Multifactorial interventions based on individual risk factors reduce falls significantly and are highly suggested in LTC settings and hospitals.	provide evidence-based knowledge and tips on fall prevention.	
Suen, J., Dawson, R., Kneale, D., Kwok, W., Sherrington, C., Sutcliffe, K., Cameron, I. D., & Dye, S. M. (2024).	This study used a conceptual framework .	The research question for this study is “Can identifying the conditions of randomized controlled trials (RCTs) associated with reducing falls in residential aged care facilities	The methodology used in this study was a qualitative comparative analysis (QCA), a synthesis method of qualitative systematic reviews.	The analysis used QCA was conducted using the graphical user interface (GUI). The intervention components of the theory from ICA were included in a Truth Table, where each row represented a single or multiple studies with the same	This study concluded that participants living in the resident aged care facilities were predominantly ambulant females in their 70s or 80s with a degree of cognitive impairment who were mostly	Yes

		explain variability?"		configuration of characteristics. The results of the first Truth Table indicated if a modified theory should be tested in a refined Truth Table or if the first theory should progress to the next step of the QCA.	provided fully or initially supervised exercise programs. Most trials had scores that indicated good quality based on the PEDro scale.	
Wallace, M., & Vannes, C. (2024).	This study used a conceptual framework .	The research question for this study was: "What is the feasibility of implementing a CDC comprehensive fall risk screening process that can be adapted to use in a current clinic screening workflow process?" "Will implementing a comprehensive	The methodology used in this study was an evidence-informed project that included seven steps for implementation.	Clinic visits, patients that were screened, and positive fear of falling reported as proportions were process measures used for the study. This study addressed the screening component of STEADI resources. Some of the data captured revealed that there is anxiety related to the fear of falling and this can impact their quality of life and many	The conclusion of this study is that this pilot indicated that the implementation of an additional screening question is feasible in the current workflow. Experienced team members can provide fall prevention education with up-to-date prevention strategies. Also, educational	Yes

		fall risk screening questionnaire in the clinic decrease the number of falls in the clinic?"		patients did not believe that they were at risk for falls until they read the STEADI resources.	materials that included intrinsic and extrinsic risks could be translated to increased self-efficacy.	
Wang, F., Han, Y., Huang, X., Man, L., Wang, R., Huang, Y., Rong, G., & Xu, Y. (2025).	This study used a conceptual framework .	The hypothesis for this study is: "Characterizing fall incidents that occur in in elderly institutionalized adults can improve fall prevention strategies."	The methodology used in this study was a retrospective cohort study conducted per the Helsinki Declaration. Data was collected from 14 nursing homes with 14,669 residents from 2020 to 2023.	The analysis used for this study was the" IBM SPSS Statistics. Pearson Chi-Square analysis and Fisher-Freeman-Halton Exact Test were performed when over 20% of cells have expected count less than 5. The Bonferroni test was performed for multiple comparison."	The study concluded that fall incidence was significantly higher during the hours of 4am to 8 am, at locations were sitting down or standing up and involving flat ground, and when residents were going to toilets, getting off the bed or walking.	Yes

Appendix B: DHA Review Question Search Log

Database or location name	Search terms	Results	Notes
Academic Search Complete	Falls reduction, fall detection, fall risk, falls nursing homes	5	Only the most appropriate articles were counted for this section
Scopus	Falls prevention, falls reduction, fall risks	7	
CINAHL	Falls Multifactorial, intervention, falls older adults	2	
Medline	Falls, nursing homes	5	
EBSCO	Falls risks, falls prevention, falls long-term care facilities, falls nursing homes, falls older adults, fall related injuries	16	This database had the most relevant articles and those that did not meet the criteria were eliminated.
Applied Sciences	Falls older adults	2	
IEEE Explore	Fall risks, falls long-term care facilities, falls older adults, fall assessments	5	
Science Direct	Falls risks assessments, falls skilled nursing, falls older adults, falls consequences	6	Several articles from this data site were deemed useful
Computers & Applied Sciences	Falls	1	
Directory of Open Access Journals	Falls risk assessment	1	

Appendix C: DHA Appraisal Results Log

Author, date, and title	Eviden ce level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
<p>Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2023). Staff’s insights into fall prevention solutions in long-term care facilities: A cross-sectional study. <i>BMC Geriatrics</i>, 23(738), 1-20. https://doi.org/10.1186/s12877-023-04435-7</p>	<p>III, Good</p>	<p>Long-term care facilities, patient safety and quality improvement. The specific problem that this study addressed was to explore the insight of staff regarding fall prevention measures.</p>	<p>The findings of this study revealed that analysis and modification of the environment in addition to staff education, monitoring residents with the use of alarms and calling systems, and the use of protective equipment for falls prevention, were the most effective practices for</p>	<p>The metrics and measures of this study included a survey/questionnaire that captured demographic data on the best practices for preventing falls.</p>	<p>The limitations for this study include the following: it consisted of a cross-sectional design, there is potential for response bias and subjectivity due to the data being self-reported, and there were sample and tool measurement limitations.</p>

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			fall prevention. Also, this study reveals that educating staff on being attentive to the culture of the nursing home to identify specific gaps and self-learning needs.		
<p>Miura, T., & Kanoya, Y. (2025). Fall risk assessment and prevention strategies in nursing homes: A narrative review. <i>Healthcare</i>, 13(357) 1-14. https://doi.org/10.3390/healthcare13040357</p>	III, Good	Nursing homes, patient safety and quality improvement. The specific problem that this study addressed is the need for fall risk assessment tools and	The findings of this study indicate that previous studies have proven that exercise interventions have been beneficial in preventing falls, however conventional	The metrics and measures used for this study include a summary of 55 reviewed studies using secondary synthesis. The Morse Fall Scale, STRATIFY, BBS, and TUG tools were used.	The limitations of this study include the search period and database were omitted for some of the studies used which could create less rigorous synthesis.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		prevention strategies for falls, specifically for nursing homes and or long-term care facilities.	approaches alone is not sufficient. There is a need for more effective interventions that include digital technology, which include real-time monitoring with the use of wearable devices and environmental sensors. Additional findings of this study encourage the need to incorporate enhanced		

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			training programs, evidenced-based assessment tools, and the promotion of practical studies.		
<p>Suen, J., Dawson, R., Kneale, D., Kwok, W., Sherrington, C., Sutcliffe, K., Cameron, I. D., & Dye, S. M. (2024). Qualitative comparative analysis of exercise interventions for fall prevention in residential aged care facilities. <i>BMC Geriatrics</i>, 24 (728) 1-20. https://doi.org/10.1186/s12877-024-05246-0</p>	III, High	Residential Aged Care Facilities, fall prevention and patient safety and quality. The specific problem that this study addressed was which exercise program was the most effective for	Findings of this study imply that exercise interventions used for fall prevention in residential aged care facilities should concentrate on providing moderate or low intensity group exercise. It is imperative	The measures and metrics used in this study were a combination of qualitative and quantitative logic that used Boolean algebra to determine which processes produced specific outcomes.	The limitations of this study included heterogeneity of interventions, data source limitations, and publication bias.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		fall prevention in residential aged care facilities.	to consider the level of frailty and mobility level and to tailor an exercise regimen for each resident.		
<p>Chowa, L. (2021). Introducing an evidenced-based protocol to reduce and prevent fall events among elderly hospice patients. <i>Patient Safety and Quality Improvement Journal</i>, 9(2), 109-119.</p> <p>https://doi.org/10.22038/psj.2021.49691.1277</p>	V, Good	Hospice agency, fall prevention, patient safety and quality. The specific problem that this study addressed was the lack of standardized, evidence-based guidelines to better identify and	The findings of this study answer evidence-based practice that the use of a nurse-led multifactorial intervention consisting of fall risk education, a post-fall huddle session, universal fall precautions education, and	The metrics and measures used in this study were the number and rate of patient falls per 1000 patient-days, chart audits and observations to assess staff adherence, and staff knowledge of fall prevention.	The limitations of this study included design, there was no control group used, the sample size used was small, potential data collection bias, and the period of evaluation was short.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		prevent falls for hospice patients.	the 5 Ps to reduce falls, are highly effective for hospice patients at home or in skilled nursing facilities.		
<p>Hosseini, H. (2024). Optimizing falls-related planning and intervention for nursing facilities by ownership type. <i>Hospital Topics</i>, 102(4), 231-236. https://doi.org/10.1080/00185868.2022.2118094</p>	III, Good	Nursing Homes, patient safety and quality. The specific problem being addressed in this study is that ownership type models can impact staffing patterns, safety	The study findings that answer the evidence-based practice question is that ownership types of nursing homes, without consideration for ownership types, can have a major impact on the level of performance	The measures used in this study were fall percentage of long-stay residents, facility and staffing variables, and population size. The statistical metrics included ANOVA, multiple regression analysis, and post-hoc tests.	The limitations of this study included the use of secondary data, the geographic scope included 40 nursing homes in Pennsylvania, which limits generalizability, cross-

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		culture, and the investment of fall prevention programs.	regarding assessing falls among the elderly in nursing homes. Current results demonstrate the need to consider ownership and organization types for fall prevention plans to make them holistic in nature.		sectional design was used, which cannot establish causation, there was self-reported data, which can create bias, and limited qualitative depth.
Kuhnow, J., Hoben, M., Weeks, L.E., Barber, B., & Estabrooks, C.A. (2022). Factors associated with falls in Canadian long term care homes: A retrospective cohort study. <i>Canadian Geriatrics Journal</i> , 25(4), 328-335. https://doi.org/10.5770/cgj.25.623	III, Good	Long-term care facilities, patient safety and quality. The problem being addressed is identifying	The findings of this study that help answer the evidence-based practice were the determination of factors that are identified	Falls within the last 31-180 days of a fall event. The descriptive measures were age, gender, province, home size, ownership model.	The limitations of this study include the dependence on the RAI-MDS 2.0, as there is a debate on the

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		factors that are most associated with falls in long-term care facilities.	with falls for people in long-term facilities. The resident's individual physical ability was the largest group of independent factors that lead to falls. Residents who sustained a fracture or an acute change in behavior, mobility, or activities of daily living are at a higher risk for falls.		validity and reliability regarding outcomes for research purposes.
Linnerud, S., Kvaal, L.A.H., Graverholt, B., Idland, G., Taraldsen, K., & Brovold, T. (2023). Stakeholder development of an implementation strategy for fall prevention in Norwegian home	III, High	Home care services, patient safety and quality.	The findings from this study help answer the evidence-	The methods used in this study include workshops, focus	The limitations of this study include

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
<p>care-a qualitative co-creation approach. <i>BMC Health Service Research</i>, 23(1390), 2-10. https://doi.org/10.1186/s12913-023-10394-x</p>		<p>The problem being addressed is to develop implementation strategy for fall prevention, specifically for healthcare providers working in home care services.</p>	<p>based practice by providing a better understanding of implementing fall prevention for home care services. There is an emphasis to have teams lead by interdisciplinary healthcare providers from various levels of the organization using a systematic implementation process.</p>	<p>group interviews, individual interviews, and participant validation. Measures used in this study include experience with fall prevention, perceptions of current practices, and leadership role of implementation.</p>	<p>limited geographical scope and previous experience and imbalanced gender use.</p>

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
<p>Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2024). Staff perspectives on fall prevention activities in long-term care facilities for older residents: “Brief but often” staff education is key. <i>PLOS ONE</i>, 28(2), 68-72. https://doi.org/10.1371/journal.pone.0310139</p>	<p>III, Good</p>	<p>Long-term care facilities, patient safety, and quality. The specific problem that was addressed in this study is solving the gap of the limited understanding of how nursing home staff implement fall prevention activities.</p>	<p>The findings of this study were systemic, organizational, and individual factors to assess fall prevention. Additional findings support the need for ongoing staff training with effective collaboration.</p>	<p>The measures used in this study were: semi-structured interviews used in long-term care facilities in Ireland, thematic analysis using Braun and Clark’s framework, NVivo software to organize and code the data. The metrics used were triangulation, member checking, audit trail, and reflexivity.</p>	<p>The limitations of this study are convenience sampling, which could create bias, small sample size, and lack of detail for strategies that are trustworthy.</p>

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
<p>Boyce, R.D., Kravchenko, O.V., Perera, S., Karp, J.F., Kane-Gill, S. L., Reynolds, C.F., Albert, S.M., & Handler, S.M. (2022). Falls prediction using the nursing home minimum dataset. <i>Journal of the American Medical Informatics Association</i>, 29(9), 1497-1507. https://doi.org/10.1093/jamia/ocac111</p>	<p>III, High</p>	<p>Nursing homes, patient safety and quality. The specific problem addressed in this study was whether a minimum data set could be utilized to develop and implement a predictive model for use in nursing homes to identify the residents at the highest risk for falls.</p>	<p>The findings of this study that answered the evidence-based question is that the use of antidepressants displayed a protective association in subgroups of previous falls, the need for walking devices, and lower-body mobility limitations. Overall, the findings of this study provide a data-driven falls prediction model that can</p>	<p>This study uses quantitative metrics (area under ROC curve -AUC=0.668 and statistical measures (CART splits, logistic regression coefficients, and confidence intervals.</p>	<p>The limitations of this study include limited data from five facilities, which could create generalizability, this is a retrospective design, which may create bias, and there was no direct comparison of model for output to clinical fall outcomes.</p>

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			be used in nursing homes.		
<p>Burgess, A. J., Clee, D., Prichburg, A., Burberry, D. J., Keen, L, & Davies, E. A. (2023). CWTC in the community: Improving education to reduce adverse outcomes for patients who fall in nursing homes. <i>Gerontology & Geriatrics Education, 45</i>(4), 515-523. https://doi.org/10.1080/02701960.2023.2255536</p>	III, Good	Nursing homes, clinical practice, patient safety, and quality. The specific problem addressed in this study was the inconsistent management of post-falls and limited training for staff that frequently lead to hospital	The findings of this study answer the evidence-based practice question by illustrating that education and continuous fall management policies were beneficial for nursing home staff by improving confidence and lowering the utilization of unnecessary emergency services.	The measurements used in this study were a retrospective audit of emergency call data, pre- and post-intervention staff surveys, and the likelihood of staff contacting emergency services.	The limitation of this study is that there was no control group used, the data was dependent on a self-reported survey, which could create bias, and there was limited generalizability.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		admissions and unfavorable patient outcomes.			
Colón-Emeric, C. S., McDermott, C. L., Lee, D. S., & Berry, S. D. (2024). Risk assessment and prevention of falls in older community-dwelling adults: A review. <i>JAMA</i> , (16):1397–1406. doi:10.1001/jama.2024.1416	V, Good	Primary care, geriatrics, and rehabilitation, patient safety and quality. The problem addressed in this study is the reduction of falls for elderly adults residing in the community.	The findings of this study answer the evidence-based practice question of best practices of falls prevention by recommending routine screening to include the history of falls, gait, etc., incorporating strengthening exercise programs, and multi-factorial	The metrics used for this study include a total falls per 1,000 patient years, risk ratio of 95% CI, proportion of people who fall, outcomes of injury, Odds Ratio, Gait speed-offs, and heterogeneity.	Limitations of this study include heterogeneity regarding the main trials, the evidence is the best suited for community dwelling older adults, uncertain of the applicability for the elderly in nursing facilities, and the article

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			assessments for high-risk elders.		incorporates a narrative synthesis which could create bias tables.
Cote, A., Duffy, J., Watson, J. L., & Smith, R. A., (2022). The relationship between OT practitioner productivity requirements and quality care measures in nursing homes. <i>American Journal of Occupational Therapy</i> , 76(1). https://doi.org/10.5014/ajot.2022.76S1-PO160	III, Good	Hospitals, skilled nursing facilities, and rehabilitation centers, patient safety and quality, and clinical guidelines. The research problem being addressed is the impact of OT productivity and quality measures in	The findings for this study that can answer the evidence-based practice question as it provides awareness of systemic pressure that affects the practices of occupational therapists and patient outcomes. The quantitative data from this	The measures used for this study included: independent variables (self-reported OT productivity), dependent variables (CMS Nursing Home Compare quality indicators, control variables (size of the facility, ownership, staffing, and case mix). The metrics used was	The limitations of this study include the study design, the study cannot determine causality, the sampling method can attribute to sampling bias, this study also used self-reported data, which can attribute to

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		nursing facilities.	study indicated a significant negative correlation between high productivity and reaching quality measures and the qualitative data indicated burnout, a reduction in quality of care, and ethical concerns.	correlation and regression analyses (SPSS <0.05).	response bias. Lastly, the sample size was small, 135 participants.
Gindoff, J., & Moyer, H. (2022). Taking the fall? Enhancing the quality of life in long term care. <i>GeriNotes</i> , 29(5), 15-18. https://www.proquest.com/trade-journals/taking-fall-enhancing-quality-life-long-term-care/docview/2736354394/se-2	V, Good	Long-term care facilities, patient safety and quality. The specific problem being addressed is	The findings of this study that answer the evidence-based question is that falls occur three times higher in long-term care	The measures used in this study were a monthly review of incident reports, clinical records and post-fall documentation, nursing home	The limitation of this study is that it is a non-research design that could provide potential

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		the identification of barriers to physical activity and mobility in long-term care facilities and offer evidence-based approaches to improve the quality of care for residents.	facilities than in the community. The three domains of barriers to physical activity include resident, environment, and organization.	safety log, administrative records, and staff audits. The metrics used were number of falls per 1,000 per-resident days, the percentage of falls resulting in injuries, number of residents with less than two falls, the number of residents transferred to the hospital post-fall, and the percentage of falls with a post-fall huddle review.	bias, limited generalizability, and it lacks a systematic methodology .

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
<p>Horta Reis Da Silva, T. (2023). Falls assessment and prevention in the nursing home and community. <i>British Journal of Community Nursing</i>, 28(2), 68-72. EBSCO-FullText-06_22_2025 (1).pdf</p>	<p>V, Good</p>	<p>Nursing homes and older adult community dwellings, patient safety and quality. The problem being addressed is the determination of incidence, risk factors, and the prevention of falls among older adults living in nursing homes and in community settings, to prevent falls.</p>	<p>The findings of this study that answer the evidence-based practice question is that residents of long-term care facilities are three times more likely to fall than those in the community and are ten times more likely to be injured. This study recommends the use of the MFRS, staff education, and changing</p>	<p>The measures used in this study was the Multifactorial Falls Risk Screen (MFRS) and tools from the NHS Scotland’s “Managing Falls and Fractures” resources.</p>	<p>The limitation of this study is that there were no original data collection or analysis and the study relied on previously published literature and national guidelines. Also, there was no evaluation of interventions or outcomes.</p>

Author, date, and title	Eviden ce level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			environment to prevent falls.		
<p>Mark, J.A., Henry, A., Bergen, G., Moreland, B., & Dobash, D. (2024). Assessing older adults' readiness for adopting fall prevention recommendations using the transtheoretical stages of change. <i>Journal of Applied Gerontology</i>, 44(5), 726-736. https://doi.org/10.1177/07334648241289933</p>	III, High	Community dwelling, patient safety and quality, clinical guidelines. The problem being addressed is what are the best strategies to implement for older adults for fall prevention.	The findings of this study that answer the evidence-based practice question is that 61% of older adults were in the action stage for fall prevention, 29% were in the action/preparat ion stage regarding strength and balance. Participants that believed falls were	The measures used were Stage of Change categories, predictors, and statistical. The metrics used are 95% confidence intervals, risk ratios, and p-values (<0.05).	The limitation of this study is that it used self-reporting and is cross-sectional.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
			preventable had the strongest correlation of being in the change stage for prevention of falls.		
<p>Schoberer, D., Breimaier, H.E., Zuschnegg, J., Findling, T., Schaffer, S., & Archan, T. (2022). Fall prevention in hospitals and nursing homes: Clinical practice guideline. <i>Worldviews on Evidenced-Based Nursing</i>, 19, 86-93. https://orcid.org/0000-0002-9831-0570</p>	V, High	Hospitals and long-term care facilities, clinical practice guidelines, patient safety and quality. The problem being addressed in this study is identifying the practice guidelines for fall	The findings of this study answered the evidence-based practice question by providing revised knowledge on using multifactorial interventions based on individual risk factors that can be applied in hospitals and	The metrics and measures of this study consisted of meta-analyses, and the evidence was graded using Grading of Recommendations Assessment Development and Evaluation (GRADE) approach.	The limitation of this study is the need for interventions such as exercise for frail patients.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		prevention among the elderly in hospital and long-term care facility settings.	long-term care facilities. The findings of this study also recommend screening, informing and training patients who are at risk for falls.		
<p>Wallace, M., & Vonnies, C. (2024). Implementation of stopping elderly accidents, deaths and injuries (STEADI) fall risk screening in the ambulatory oncology setting: A pilot project incorporating fear of falling. <i>International Journal of Safe Pointe Handling & Mobility</i>, 14(3), 90-99. https://research.ebsco.com/c/riljaj/viewer/pdf/yh5esn74nz</p>	V, Good	Ambulatory settings, clinical practice guidelines, patient safety and quality. The specific problem being addressed in this study is to identify the most	The findings of this study answer evidence-based practice questions by illustrating the effectiveness of incorporating additional screening questions to the current	The measures used in this study were a STEADI-based fall screening tool, Falls Efficacy Scale-International (FES-I) as the fall risk instrument, Timed Up and Go (TUG) test, process and	The limitations of this study include no control group was used, there was limited outcome data shared in the study, and potential bias.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		effective fall screening toolkits among adult oncology patients.	practice, also demonstrating the benefits of having well-versed team members to provide fall prevention education with current practices.	clinical measures.	
Wang, F., Han, Y., Huang, X., Man, L., Wang, R., Huang, Y., Rong, G., & Xu, Y. (2025). The characteristics of falls in an institutionalized elderly cohort in China-A retrospective observational study. <i>Geriatric Nursing</i> , 61, 27-33. https://doi.org/10.1016/j.gerinurse.2024.10.045	III, Good	Nursing homes, patient safety and quality. The specific problem being addressed is to determine the common factors of falls sustained for individuals	The findings of this study that help answer evidence-based practice questions is the identification of substantial details as to when falls occur at facilities, common injuries	The measures used in this study included fall characteristics, the outcomes of the injuries, fall frequency, demographic distribution. The metrics that were used were +SD for continuous variables and the	The limitations of this study are that a retrospective design was used, therefore there is the potential for causal inference. This study also

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		living in institutional settings and to provide data to advise of fall prevention practices.	sustained, in order to provide staff with prevention strategies.	Fisher-Freeman-Halton exact test.	depended on the accuracy of institutional fall reports.
Dengiz, A., Aytepe, A., Sirri, B., & Efe, M. (2025). Investigation of commonly used assessment methods for predicting fall risk in the elderly. <i>Experimental Gerontology</i> , 206 (112784) 1-8. https://doi.org/10.1016/j.exger.2025.112784	III, Good	Community and institutional settings, clinical practice guidelines, patient safety and quality. The specific problem being addressed is identifying associations between assessment	The findings from this study that answer the evidence-based practice question is the Morse Fall Scale (MFS) and Timed Up and Go (TUG) tests provided statistically significant indicators for the risk for falls. This study also	The measures and metrics used for this study include Morse Fall Scale, Timed Up and Go (TUG), Modified Falls Efficacy Scale (MFES), and Berg Balance Scale. The statistical analysis was completed with logistic regression, Hosmer-	The limitations of this study include the lack of a cross-sectional design, causation could not be created, no randomization or control group was used, limited generalizability and

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		scores and fall risks among the elderly.	provides recommendations for administrators and staff to use a multidisciplinary approach instead of the use of one tool.	Lemeshow goodness-of-fit, Nagelkerke, and ROC analysis.	potential for bias due to self-reporting.
Luo, Y., Chai, X., Ran, H., Deng, Y., Liu, J., & Zhao, L. (2025). Refining fall risk assessment scale for nursing homes among older adults with cognitive impairment: A Mokken Analysis. <i>Journal of Clinical Nursing</i> , 1-9. https://doi.org/10.1111/jocn.70095	III, High	Nursing homes/facilities, clinical practice guidelines, patient safety and quality. The specific problem that was addressed is the identification of the most appropriate	The findings of this study that answer the evidence-based practice question by proving that the fall risk assessment scale is practical for determining the risk for falls of older adults with	The metrics and measures used for this study include FRAS-NH (risk assessment scale), Mokken analysis, local independence, monotonicity, and reliability.	The limitations of this study include the use of a lower sample size, and the study only used findings from one nursing home, which can limit the stability of the results.

Author, date, and title	Eviden ce level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		risk assessment scale- (FRAS-NH) for nursing home settings for residents with cognitive impairment using.	cognitive impairments, using a unidimensional scale with seven items.		
Acosta, D. J., Rinfret, A., Plant, J., & Hsu, A. T. (2022). Using patient simulation to promote best practices in fall prevention and postfall assessment in nursing homes. <i>Journal of Nursing Care Quality</i> , 37(2)117-122. https://doi.org/10.1097/NCQ.0000000000000599	III Good	Nursing homes, clinical practice guidelines, patient safety and quality. The specific problem that was addressed in this study was the determination	The findings from this study that answer the evidence-based practice question is that the simulation-based training was effective and it provided reinforcement for fall prevention practices in	The metrics and measures used for this study include five-point Likert scale items that evaluated simulation quality, debrief, and relevance, open-ended survey questions to assess learning	The limitations of this study include generalizability and causality.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		of the best practices to train staff after a resident fall.	nursing homes. This study indicated the need for well repeated training.	and intended application.	
<p>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. <i>BMC Geriatrics</i>, 23(47) 1-38. https://doi.org/10.1186/s12877-023-03738-z</p>	V, High	<p>Long-term care facilities, clinical practice guidelines, patient safety and quality. The specific problem addressed in this study was to synthesize results of the best practices and implementation outcomes</p>	<p>The findings of this study answer the evidence-based practice question by being the first study that synthesizes the comprehensive implementation strategies for long-term care facilities as an intervention for fall prevention. Three imperative</p>	<p>The measures used in this study included a narrative synthesis using two frameworks: ERIC taxonomy -Expert Recommendations for Implementing Change and Implementation Outcomes Framework.</p>	<p>The limitations of this study was heterogeneity (non-quantitative) and variable reporting across studies.</p>

Author, date, and title	Eviden ce level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		for fall prevention in long-term care facilities for older adults.	educational strategies were identified: providing once-off training, dynamic education, and ongoing medical consultation.		
Parekh, A., Hill, K. D., & Guerbaai, R. A. (2024). Exploring post-fall management interventions in long-term care facilities and hospitals for older adults: A scoping review. <i>Journal of Clinical Nursing</i> , 34, 408-421. https://doi.org/10.1111/jocn.17546	III, High	Long-term care facilities and hospitals, clinical practice guidelines, patient safety and quality. The specific problem that this study addressed is the determination	The findings from this study that answer the evidence-based practice question is that well-structured post-fall protocols are indicative of reduction in hospital transfers.	The measures used in this study were the Joanna Briggs Institute (JBI) framework and PRISMA-ScR reporting guidelines. The thematic and narrative synthesis was completed using AACTT framework.	The limitations of this study were heterogeneity of interventions may limit the comparability of studies that reported on similar approaches.

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		of the best interventions to implement that support post-fall care for older adults in long-term care facilities and hospitals.			
Binns, E., Bright, F., Parsons, J., Peri, K., Taylor, L., Kerse, N., & Taylor, D. (2023). "It's all about the money": An interpretative description of embedding physical therapy-led falls prevention group exercise in long-term care. <i>BMC Geriatrics</i> , 23(14) 1-10. https://doi.org/10.1186/s12877-022-03722-z	III, High	Long-term care facilities, clinical practice guidelines, patient safety and quality. The specific problem that this study addressed was to determine which factors	The findings from this study that answer the evidence-based practice question is the determination of barriers for continuity of physical therapy-led falls prevention exercise groups which	The metrics and measures used for this study were an interview guide, using principles of Interpretive Description (ID), conventional content analysis, and semi-structured focus groups at long-term care facilities.	The limitation of this study is that it used a small purposive sample size, which limited generalizability. This study also contained potential participant

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		influence providers at long-term care facilities to continue the use of physical therapist fall prevention exercise programs.	include lack of funding and resources, the need for evidence to justify the costs, and philosophies of the organization business models.		bias, interpretive subjectivity, and lacked perspective from the residents.
Yamauchi, Y., & Shimoi, N. (2023). Posture classification with a bed-monitoring system using radio frequency identification. <i>Sensors</i> , 23, (704) 1-16. https://doi.org/10.3390/s23167304	III, High	Long-term care facilities and hospitals, clinical practice guidelines, patient safety and quality. The specific problem that this study addressed was to	The findings of this study that answer evidence-based practice questions included the use of 2-6 tags to classify patient postures and fall detection rates, the more	The metrics and measures used in this study include a detection rate percentage for posture classification, compared accuracy using 2, 4, and 6 RFID tags, and postured tests.	The limitations of this study were the small sample size used, a long-term care facility was not used, no elderly or fall-risk participants were used,

Author, date, and title	Evidence level and quality rating	Focus: HSO type, research domain, and specific problem being addressed	Findings that help answer the review question(s)	Metrics and measures if used	Source limitations
		monitor bed activity to predict falls in nursing homes with the use of RFID tags.	tags used, the higher the detection rate. A four-tag setup was the most effective in determining bed separation.		and there was limited generalizability.

Appendix D: DHA Thematic Analysis Results Template

Author(s) and date	Findings from article with Initial themes	Theme Development
Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2023).	Explored the significance of brief staff educational meetings for fall prevention practices and to maintain these guidelines.	Ongoing, brief staff training to sustain fall prevention and increased compliance with safety measures.
Miura, T., & Kanoya, Y. (2025).	Discussed the importance of fall prevention guidelines that incorporated staff education, support from leadership, exercise programs, and environmental modifications to include safety devices, lighting, and flooring	Various fall risk assessment tools, multifactorial prevention strategies, facility barriers, staff, leadership and staff support.
Suen, J., Dawson, R., Kneale, D., Kwok, W., Sherrington, C., Sutcliffe, K., Cameron, I. D., & Dye, S. M. (2024).	A qualitative comparative analysis that determined the key factors for fall prevention include modifications of exercise consisting of moderate or low intensity group exercise or for independent residents, one or more hours per week.	Specific combinations of exercise and feasible duration lead to fall prevention, supervision, and engagement, resident specific interventions, dose of exercise.
Chowa, L. (2021).	Multifactorial intervention was effective for fall reduction in hospice patients. Staff adhered to fall risk assessments, post-fall huddles, universal fall precautions, 5-P fall reduction education, and care planning and as	Evidence-based protocols for fall reduction, staff education, consistency, and compliance.

	needed modifications.	
Hosseini, H. (2024).	Facility ownership and type (for-profit versus nonprofit, public facilities versus franchises) are strongly associated with fall rates and outcomes. Fall prevention interventions should be modified per facility ownership and model.	Importance of ownership and profit model, customized interventions, multi-source data, mixed methods, and protocol design.
Kuhnow, J., Hoben, M., Weeks, L.E., Barber, B., & Estabrooks, C.A. (2022).	The findings of an analysis of over 28,000 in Western Canada indicate that residents with a history of fractures, moderately impaired cognitive skills, limited support for balance while standing, and wandering behavior increase the chances for falls. There is also a correlation for fall risk that includes sleep patterns, resident moods, ADL function, and urinary incontinence	Fall predictors. Physical function, balance. The importance of cognitive status and behavior, restraint versus prevention, and standardized assessment tools.
Linnerud, S., Kvael, L.A.H., Graverholt, B., Idland, G., Taraldsen, K., & Brovold, T. (2023).	There are four key elements for fall prevention implementation strategies include: empower leaders to implement measures, develop implementation teams, incorporate knowledge and skills for fall prevention, and foster support for fall prevention implementation.	Shared responsibility, implementation skills, implementation support, support from leadership, multidisciplinary support, and strong structures.
Albasha, N., Curtin, C., McCullagh, R., Cornally, N., & Timmons, S. (2024).	Falls are inevitable but the incidence of falls can be reduced by identifying the key barriers in long-term facilities that include inadequacies of staffing levels, skill distribution, limitation to access to therapists, staff workloads, time	Adequate staffing levels, safe environments, assistive devices, fall policy, leadership, knowledgeable staff, good communication, and multidisciplinary collaboration.

	constraints, design of the facility that can be hazardous, and lack of equipment.	
Boyce, R.D., Kravchenko, O.V., Perera, S., Karp, J.F., Kane-Gill, S. L., Reynolds, C.F., Albert, S.M., & Handler, S.M. (2022).	A hybrid CART-logistic model was used to predict fall occurrence for nursing home residents. Findings of the model indicated a protective association between the use of antidepressant medications with factors like fall history before admission, lower body range of impairment of motion, even when there were additional risk factors such as behavioral issues and the use of multiple psychotropic drugs.	Hybrid model, effects of antidepressants, logistic regression, CART decision trees, predictive performance, and short-term prediction.
Burgess, A. J., Clee, D., Prichburg, A., Burberry, D. J., Keen, L, & Davies, E. A. (2023).	Due to an educational intervention at nursing homes in Swansea Bay, the number of residents taken to the hospital after falling decreased, mainly due to improving staff confidence in assisting patients after a fall. The use of OPAS (Older Person's Assessment Service) was beneficial in decreasing the dependence of emergency services.	Older Person's Assessment Service (OPAS), gaps in the adoption of fall guidelines, staff confidence versus practice change, reduction of hospital conveyance, and response alternatives
Colón-Emeric, C. S., McDermott, C. L., Lee, D. S., & Berry, S. D. (2024).	Gait and balance disorders, orthostatic hypotension, vision and hearing impairments, side effects of medications, and environmental hazards are the key fall risk factors that can be modified to prevent falls.	Effectiveness of various prevention strategies, multifactorial interventions for high-risk populations, multidimensional risk, modifiable risks, and clear risk stratification.
Cote, A., Duffy, J., Watson, J. L., &	The effects of high productivity	Productivity demands versus high quality

Smith, R. A., (2022).	requirements for OT practitioners have a negative outcome for residents as many respondents of the study felt that the high demands for patient-facing time lowered their capacity to provide quality care for residents.	care, stress, staff burn-out, structural change, negative impact on resident care, and impact on outcomes.
Gindoff, J., & Moyer, H. (2022).	The significant negative impact of patient falls affects residents' physical health and their quality of life. Fall prevention implementation strategies need to incorporate preserving resident dignity, autonomy, and overall life satisfaction.	Quality of life as an essential outcome, resident decision-making, empowerment, staff training for fall prevention and response, and prioritizing safety versus autonomy.
Horta Reis Da Silva, T. (2023).	Residents of nursing homes are three times more likely to fall versus older adults that live in the community and nursing home residents are ten times more likely to sustain a serious injury due to a fall. This study indicates that some safety measures can restrict resident mobility, making them more susceptible to falls due to lowered independence and decreased quality of life.	Fall prevention versus mobility, fall-risk consequences in nursing homes versus in the community, beliefs that falls are unavoidable, and good fall prevention include intrinsic and extrinsic factors.
Mark, J.A., Henry, A., Bergen, G., Moreland, B., & Dobash, D. (2024).	The most common stages of change for fall prevention strategies include action for fall prevention behavior and the contemplation stage for medication management. Older adults that believe falls are preventable and those who have	Readiness varies based on behavior, communication with healthcare providers encourages change, beliefs in falls prevention, and stage of change model fosters planning.

	spoken with their providers about their risk for falls are more likely to be in the action stage for fall prevention.	
Schoberer, D., Breimaier, H.E., Zuschnegg, J., Findling, T., Schaffer, S., & Archan, T. (2022).	The use of multiple prevention strategies structured on individual needs, body exercise interventions, and education and counseling interventions were strongly recommended in this systematic review as high priority.	Tailored interventions for effectiveness, individualized plans, strength and balance exercise, education and counselling are key, and risk assessments.
Wallace, M., & Vannes, C. (2024).	The use of STEADI screening in ambulatory oncology settings can help identify patients at risk of falling. Pilot implementations indicate practice barriers which may include time constraints and staff training needs.	Fear of falling as a motivation and barrier, individualized fall screenings and prevention protocols, workflow and staff education,
Wang, F., Han, Y., Huang, X., Man, L., Wang, R., Huang, Y., Rong, G., & Xu, Y. (2025).	This study encompassed 304 institutionalized older adults who had a history of at least one fall, key findings revealed that most of these falls occurred between 4:00 am to 8:00 am, while getting out of bed walking, or going to the restroom on flat ground. Most of the injury sited were the head and lower limbs, and female were more likely to sustain a fall between 12:00 am to 4:00 am, and more likely to incur body trunk injuries and bone fractures after a fall.	Time frames for susceptibility for falls, risk moments, gender-specific risk factors, basic movements, and high-risk factors for fractures.
Dengiz, A., Aytepe, A., Sirri, B., & Efe, M. (2025).	Findings of this study of 195 elderly adults indicate the MFS and TUG	Balance and mobility tests as key predictors, the use of the combination of

	assessments were the most effective assessments to use for identifying fall risks for this age group.	tools are most effective for fall prediction, and the need for multidimensional assessments.
Luo, Y., Chai, X., Ran, H., Deng, Y., Liu, J., & Zhao, L. (2025).	This cross-sectional survey conducted in nursing homes with cognitive impairment using a scale refinement with Mokken analysis provided recommendations for a 7-item version for practicality.	Simplicity promotes practical use, significance of psychometric rigor, and modification based on cognitive impairment.
Acosta, D. J., Rinfret, A., Plant, J., & Hsu, A. T. (2022).	There was a 98.5% positive response rate from this study that incorporated open-ended responses on the simulation-based fall prevention training. The key elements of this training included post-fall assessments, post-fall huddles, and ideas to prevent future falls.	Simulation for effectiveness, post-fall implementation, practical integration, and the need fall prevention training more often.
Albasha, N., Ahern, L., O'Mahony, L., McCullagh, R., Cornally, N., McHugh, S., & Timmons, S. (2023).	39 fall prevention implementation strategies were used in this review and the most used and effective of these included education and training of stakeholders, evaluative/iterative strategies, and stakeholder interrelationship development.	Fall education modification is important, stakeholder relationships, evaluative and iterative strategies foster improvement, and tailored interventions.
Parekh, A., Hill, K. D., & Guerbaai, R. A. (2024).	Data was extracted using the ACTT framework (Actor, Action, Context, Target, Time) to review interventions in the post-fall period at hospitals and long-term care facilities. Structured protocols were perceived as the most effective and there were mixed reviews	Structured protocols are beneficial, mixed reviews on fall assessment tools and huddles, varied interventions, and structured team debriefs.

	on the effectiveness of fall assessment tools and huddles.	
Binns, E., Bright, F., Parsons, J., Peri, K., Taylor, L., Kerse, N., & Taylor, D. (2023).	The Staying UpRight (SU _p) trial was used at a few long-term care facilities that included physical therapy led fall prevention group exercise in New Zealand. Staff found the program effective, but providers did not feel as if the current funding model supported this type of fall intervention due to limited funding, staffing, and organizational priorities.	Business and funding models, business philosophies, decision-makers need evidence to support, and physical therapy benefits.
Yamauchi, Y., & Shimoi, N. (2023).	A contactless bed monitoring system was used in this study that included RFID (radio frequency identification) to detect bed activity. There were indications that the use of four tags was the most effective in detecting postures with moderate complexity for fall detection.	RFID for bed monitoring for fall detection, early detection for leaving bed events, fall preventions and alerts, and more tags for more posture distinctions.

Appendix E: Final Concept/Thematic Map

