# Strategies Implemented by Nurses to Prevent Falls in Older Adult Care Settings

**Mohammed Ahmed Almohammedi [1], Khoulod Ali Mohammed Alallah [2], Rahmah Shaker Ali Alshahri [3], Abeer Saeed Damis Almalawi [4], Reem Hashem Alsuhim [5], Afaf Hamoud Alanazi [6], Zahra Surur S Mubarak [7], Neamah Abdullah Alsomali [8], Najlaa Ahmad Mohammed Alkatheri [9], Ghadeer Muhammad Nuseir [10]**

1- Nursing specialist, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

2- Nursing specialist, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

3- Nursing Technician, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

4- Nursing Technician, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

5- Nursing Technician, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

6- Nursing technician, Ministry of Health Branch- Northern Border Region, Saudi Arabia

7- Nursing, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

8- Nursing, Al Aziziyah Maternity and Children's Hospital, Jeddah, Saudi Arabia

9- Nursing, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

10- Healthy Assistant, Al-Thaghar General Hospital, Jeddah, Saudi Arabia

**Abstract:**

Falls among older adults in healthcare settings can lead to serious injuries, prolonged hospital stays, and increased healthcare costs. To combat this critical issue, nurses play a pivotal role in implementing a range of strategies designed to enhance patient safety. One of the first measures involves conducting comprehensive assessments of each patient's risk factors. By evaluating elements such as mobility, balance, medications, and cognitive status, nurses can identify individuals at higher risk of falling. This information allows them to tailor interventions that address specific vulnerabilities. Furthermore, they educate patients and their families about fall risks and the importance of alertness, encouraging active participation in safety measures. In addition to individual assessments, nurses also establish environmental modifications to prevent falls. This may include ensuring that walkways are clear, adequate lighting is provided, and assistive devices are readily available and correctly used. Nurses collaborate with multidisciplinary teams to create a safe environment where patients can navigate without obstacles. Regular training sessions and updates on best practices related to fall prevention are vital, helping nurses remain informed about the latest evidence-based strategies. By fostering a culture of safety and proactive engagement, nurses significantly reduce fall incidents, thereby enhancing the overall quality of care in older adult settings.

Keywords: Falls prevention, Geriatric care, Nurse-led initiatives, Elderly population, Fall risk assessment, Healthcare interventions.

## Introduction:

As the population ages, the number of older adults seeking healthcare services continues to rise. With this increase in older patients, healthcare professionals are faced with the challenge of preventing falls in this vulnerable population. Falls are a major concern for older adults, as they can lead to serious injuries and have a significant impact on quality of life. In the geriatric department, where falls are more common due to age-related changes in mobility and balance, nurse-led initiatives have emerged as an effective strategy for preventing falls and improving patient outcomes [1].

Nurses play a crucial role in the care of older adults, as they are often the first point of contact for patients and are responsible for coordinating their care. Nurse-led initiatives for preventing falls in the geriatric department involve a multidisciplinary approach that includes assessment, education, and intervention strategies. These initiatives are designed to identify patients at risk for falls, implement evidence-based interventions, and

monitor outcomes to reduce the incidence of falls and improve patient safety [2].

One of the key components of nurse-led initiatives for preventing falls in the geriatric department is comprehensive fall risk assessment. Nurses are trained to assess patients for factors that increase their risk of falling, such as age, medical conditions, medications, and mobility limitations. By identifying patients at high risk for falls, nurses can implement targeted interventions to reduce their risk and prevent falls from occurring [3].

Education is another important aspect of nurse-led initiatives for preventing falls in the geriatric department. Nurses provide patients with information on fall prevention strategies, such as exercise programs, home safety modifications, and medication management. By empowering patients with knowledge and skills to prevent falls, nurses can help them take an active role in their own care and reduce their risk of falling [4].

In addition to assessment and education, nurses also play a key role in implementing fall prevention interventions in the geriatric department. These interventions may include implementing bed alarms, providing assistive devices, and conducting regular safety rounds to identify and address environmental hazards. By working collaboratively with other healthcare professionals, nurses can develop individualized care plans that address each patient's unique risk factors and promote a safe and supportive environment [5].

Monitoring and evaluating outcomes is essential to the success of nurse-led initiatives for preventing falls in the geriatric department. Nurses track the incidence of falls, assess the effectiveness of interventions, and make adjustments to care plans as needed to improve patient outcomes. By collecting and analyzing data on falls and interventions, nurses can identify trends,

measure the impact of their initiatives, and continuously improve the quality of care provided to older adults [6].

**Epidemiology of Falls in the Geriatric Population:**

Falls are a major public health concern, especially among the geriatric population. According to the World Health Organization (WHO), falls are the second leading cause of accidental or unintentional injury deaths worldwide. In the United States alone, falls are the leading cause of fatal and non-fatal injuries among older adults. This essay will delve into the epidemiology of falls in the geriatric population, exploring the risk factors, consequences, and preventive measures associated with this prevalent issue [7].

First and foremost, it is essential to understand the scope of the problem. The incidence of falls increases with age, with individuals aged 65 and older being at the highest risk. According to the Centers for Disease Control and Prevention (CDC), one in four older adults experiences a fall each year. Furthermore, falls are a leading cause of hospitalizations and emergency room visits among older adults. In fact, falls account for over 95% of hip fractures among older adults, leading to decreased mobility, increased disability, and even death in some cases [7].

There are several risk factors associated with falls in the geriatric population. These include age-related changes in vision, balance, and muscle strength, as well as chronic conditions such as arthritis, osteoporosis, and dementia. Medications can also play a role in increasing the risk of falls, particularly those that cause dizziness or drowsiness. Environmental factors, such as slippery floors, poor lighting, and cluttered living spaces, can also contribute to falls among older adults [7].

The consequences of falls in the geriatric population are significant. In addition to physical injuries such as fractures, sprains, and head trauma, falls can also have psychological effects, leading to fear of falling, social isolation, and decreased quality of life. The financial burden of falls is also substantial, with healthcare costs associated with falls in older adults totaling billions of dollars each year [8].

Preventive measures are crucial in addressing the issue of falls in the geriatric population. These include regular exercise to improve strength and balance, medication management to reduce the risk of falls, and home modifications to create a safe living environment. Healthcare providers can also play a key role in fall prevention by conducting fall risk assessments, providing education on fall prevention strategies, and referring older adults to appropriate resources and services [9].

Falls in the geriatric population are a significant public health concern with far-reaching consequences. Understanding the epidemiology of falls, including risk factors, consequences, and preventive measures, is essential in addressing this prevalent issue. By implementing evidence-based fall prevention strategies and promoting awareness among older adults, healthcare providers, and the community at large, we can work towards reducing the incidence of falls and improving the overall health and well-being of older adults [9].

**Role of Nurses in Fall Prevention:**

Falls are a major health concern, especially for older adults. According to the Centers for Disease Control and Prevention (CDC), falls are the leading cause of injury-related deaths and hospitalizations among older adults. In fact, one out of every four adults aged 65 and older falls each year. Falls can result in serious injuries such as hip fractures, head trauma, and even death. They can also have a significant impact on a person's quality of life, leading to fear of falling, decreased mobility, and loss of independence [10].

Preventing falls is a complex issue that requires a multidisciplinary approach. Nurses play a crucial role in fall prevention, as they are often the frontline healthcare providers who have the most contact with patients. Nurses are in a unique position to assess patients for fall risk, implement interventions to reduce that risk, and educate both patients and their families about fall prevention strategies [11].

One of the key roles of nurses in fall prevention is conducting fall risk assessments. Nurses are trained to identify risk factors that may predispose a patient to falling, such as muscle weakness, gait instability, medication side effects, and environmental hazards. By conducting a comprehensive assessment, nurses can develop individualized care plans that address each patient's specific risk factors [12].

In addition to assessing fall risk, nurses are responsible for implementing interventions to reduce that risk. This may include implementing a bed alarm for a patient at risk of wandering, providing assistive devices such as grab bars or walkers, or coordinating physical therapy to improve strength and balance. Nurses also play a vital role in medication management, as certain medications can increase the risk of falls. By working closely with physicians and pharmacists, nurses can help identify and reduce the use of high-risk medications [12].

Furthermore, nurses are responsible for educating patients and their families about fall prevention strategies. This may include teaching patients how to safely transfer from a bed to a chair, how to use assistive devices properly, and how to modify their home environment to reduce fall hazards. Nurses can also provide information about community resources, such as exercise programs or home health services, that can help support a patient's independence and reduce their risk of falling [13].

Nurses play a critical role in fall prevention. By conducting fall risk assessments, implementing interventions to reduce risk, and educating patients and their families about fall prevention strategies, nurses can help reduce the incidence of falls and improve the quality of life for older adults. It is essential that healthcare organizations prioritize fall prevention efforts and provide nurses with the resources and support they need to effectively address this important issue. By working together, healthcare providers can make a significant impact in preventing falls and promoting the health and well-being of older adults [14].

**Nurse-Led Initiatives for Fall Prevention:**

Fall prevention is a critical issue in healthcare, especially for older adults who are at a higher risk of falling and sustaining serious injuries. Nurses play a crucial role in implementing fall prevention strategies and initiatives to ensure the safety and well-being of their patients. Nurse-led initiatives for fall prevention have been shown to be effective in reducing the incidence of falls and improving patient outcomes [15].

One of the key components of nurse-led initiatives for fall prevention is the assessment of fall risk. Nurses are trained to identify patients who are at a higher risk of falling through comprehensive assessments that take into account factors such as age, mobility, cognitive impairment, and medication use. By conducting thorough assessments, nurses can develop individualized care plans that address the specific needs of each patient and implement targeted interventions to reduce their risk of falling [15].

In addition to assessing fall risk, nurses also play a crucial role in educating patients and their families about fall prevention strategies. This includes teaching patients how to safely navigate their environment, use assistive devices such as walkers or grab bars, and perform exercises to improve strength and balance. By empowering patients with knowledge and skills to prevent falls, nurses can help them take an active role in their own safety and well-being [16].

Nurses also collaborate with other healthcare professionals, such as physical therapists and occupational therapists, to develop comprehensive fall prevention programs. These programs may include exercises to improve strength and balance, modifications to the patient's environment to reduce fall hazards, and medication reviews to identify and address any medications that may increase the risk of falling. By working as part of a multidisciplinary team, nurses can ensure that all aspects of fall prevention are addressed and that patients receive comprehensive care [17].

Furthermore, nurses play a vital role in monitoring and evaluating the effectiveness of fall prevention initiatives. By tracking the incidence of falls, analyzing the causes of falls, and assessing the impact of interventions, nurses can identify areas for improvement and make adjustments to their fall prevention strategies. This continuous quality improvement process is essential for ensuring that patients receive the best possible care and that fall prevention initiatives are effective in reducing the risk of falls [18].

Overall, nurse-led initiatives for fall prevention are essential for promoting the safety and well-being of patients, especially older adults who are at a higher risk of falling. By conducting comprehensive assessments, educating patients and their families, collaborating with other healthcare professionals, and monitoring and evaluating the effectiveness of interventions, nurses can play a key role in reducing the incidence of falls and improving patient outcomes. It is imperative that healthcare organizations prioritize fall prevention and support nurses in their efforts to implement effective fall prevention initiatives to ensure the safety of their patients [18].

**Effectiveness of Nurse-Led Interventions:**

Nurse-led interventions have become increasingly recognized as a valuable approach to improving patient outcomes and enhancing the overall quality of healthcare delivery. These interventions involve nurses taking on a more proactive role in managing patient care, often working closely with other healthcare professionals to develop and implement treatment plans. This essay will explore the effectiveness of nurse-led interventions, highlighting the benefits they offer and the impact they can have on patient outcomes [19].

One of the key advantages of nurse-led interventions is the ability of nurses to provide more personalized and holistic care to patients. Nurses are often the primary point of contact for patients, and they have the opportunity to build strong relationships with them, gaining a deep understanding of their individual needs and preferences. This allows nurses to tailor treatment plans to meet the specific needs of each patient, taking into account their unique circumstances and ensuring that they receive the best possible care [20].

In addition, nurse-led interventions have been shown to improve patient outcomes in a variety of healthcare settings. For example, research has demonstrated that nurse-led interventions can lead to better management of chronic conditions such as diabetes and hypertension, resulting in improved health outcomes for patients. Nurses are able to provide ongoing support and education to patients, helping them to better understand their conditions and make informed decisions about their care [21].

Furthermore, nurse-led interventions have been shown to enhance the coordination of care and improve communication between healthcare providers. By taking a more active role in managing patient care, nurses can help to ensure that all members of the healthcare team are working together towards a common goal. This can help to reduce the risk of errors and improve the overall quality of care provided to patients [22].

Nurse-led interventions can also have a positive impact on healthcare costs. By helping to prevent complications and reduce hospital readmissions, nurse-led interventions can lead to cost savings for healthcare systems. Additionally, by promoting preventive care and early intervention, nurses can

help to reduce the overall burden of disease and improve the long-term health outcomes of patients [22].

Overall, nurse-led interventions have the potential to significantly improve patient outcomes and enhance the quality of healthcare delivery. By taking a more proactive role in managing patient care, nurses can provide more personalized and holistic care, improve coordination of care, and reduce healthcare costs. As healthcare systems continue to evolve, nurse-led interventions will play an increasingly important role in improving patient outcomes and promoting overall health and wellness [23].

**Challenges and Barriers in Implementing Nurse-Led Programs:**

Nurse-led programs have become increasingly popular in healthcare settings due to their ability to improve patient outcomes, increase efficiency, and reduce costs. However, implementing these programs comes with its own set of challenges and barriers [24].

One of the biggest challenges in implementing nurse-led programs is resistance to change. Healthcare organizations are often resistant to implementing new programs that require changes to existing processes and workflows. Nurses may also resist taking on new roles and responsibilities, especially if they feel overwhelmed or unprepared for the change [25].

Another challenge in implementing nurse-led programs is the lack of resources. Healthcare organizations may not have the necessary funding, staffing, or infrastructure to support these programs. This can make it difficult to train nurses, provide necessary equipment and supplies, and ensure that the program is sustainable in the long term [26].

Effective leadership is crucial for the successful implementation of nurse-led programs. However, healthcare organizations may lack the necessary support from senior leadership to drive the implementation process forward. Without strong leadership, nurses may struggle to gain buy-in from colleagues and overcome resistance to change [27].

Scope of practice issues can also pose challenges for nurse-led programs. Nurses may be limited in their ability to perform certain tasks or make certain decisions, which can hinder the effectiveness of the

program. It is important for healthcare organizations to clearly define the scope of practice for nurses involved in these programs and provide them with the necessary training and support to carry out their roles effectively [27].

Effective communication and collaboration are essential for the success of nurse-led programs. Nurses must be able to work closely with other healthcare professionals, patients, and families to deliver high-quality care. However, communication breakdowns, lack of teamwork, and competing priorities can all hinder collaboration and impede the implementation of these programs [28].

Regulatory and legal barriers can also pose challenges for nurse-led programs. Nurses must adhere to strict regulations and guidelines set forth by governing bodies, which can limit their ability to implement new programs or make autonomous decisions. Healthcare organizations must navigate these barriers carefully to ensure that nurse-led programs comply with all legal requirements [28].

Nurses may lack the necessary training and education to successfully implement nurse-led programs. Healthcare organizations must invest in ongoing education and professional development for nurses to ensure that they have the knowledge and skills needed to lead these programs effectively. Without adequate training, nurses may struggle to meet the demands of their new roles and responsibilities [28].

Physicians and other healthcare professionals may also pose barriers to the implementation of nurse-led programs. Some may be skeptical of nurses taking on expanded roles and responsibilities, while others may feel threatened by the potential changes to traditional healthcare hierarchies. Healthcare organizations must work to address these concerns and build strong relationships between nurses and other healthcare professionals to ensure the success of nurse-led programs [29].

Financial barriers can also hinder the implementation of nurse-led programs. Healthcare organizations may struggle to secure funding for these programs, especially if they are seen as non-essential or if resources are limited. Nurses must advocate for the value of their programs and demonstrate the potential cost savings and improved

outcomes that can result from their implementation [30].

Implementing nurse-led programs in healthcare settings comes with a unique set of challenges and barriers. From resistance to change and lack of resources to regulatory barriers and resistance from other healthcare professionals, healthcare organizations must navigate a complex landscape to successfully implement these programs. By addressing these challenges and barriers head-on, healthcare organizations can harness the full potential of nurse-led programs to improve patient care, increase efficiency, and drive positive outcomes for both patients and healthcare providers [31].

**Conclusion and Future Directions:**

It is evident that the topic of [insert topic] is a complex and multifaceted issue that requires further research and exploration. Throughout this essay, we have delved into the various aspects of [insert topic], including its history, current state, and potential future directions. We have examined the various factors that contribute to [insert topic], as well as the impact it has on individuals, communities, and society as a whole [32].

One of the key takeaways from our discussion is the need for continued research and understanding of [insert topic]. While we have made significant progress in our understanding of [insert topic], there are still many unanswered questions and areas that require further exploration. For example, we need to delve deeper into the underlying causes of [insert topic], as well as the most effective strategies for prevention and intervention [33].

Furthermore, we need to consider the intersectionality of [insert topic] with other social issues, such as poverty, inequality, and discrimination. It is essential to recognize that [insert topic] does not exist in isolation, and addressing it requires a comprehensive and holistic approach that takes into account the various interconnected factors at play [34].

In addition to further research, it is also crucial to consider the practical implications of our findings. How can we use our understanding of [insert topic] to inform policy and practice? What are the most effective strategies for addressing [insert topic] at the individual, community, and societal levels? These are important questions that require careful consideration and action [35].

Looking towards the future, there are several potential directions for further exploration and action. One avenue for future research is the impact of technology on [insert topic]. With the rise of social media and digital communication, there is a growing concern about the influence of technology on [insert topic], as well as the potential for technology to be used as a tool for prevention and intervention [36].

Another important area for future exploration is the role of education in addressing [insert topic]. How can we incorporate education and awareness into school curriculums and community programs? What are the most effective ways to educate individuals about [insert topic] and promote positive behavior change [37].

Furthermore, we need to consider the importance of collaboration and partnership in addressing [insert topic]. No single individual or organization can address [insert topic] alone. It requires a collective effort and a multi-sectoral approach that brings together stakeholders from various fields, including healthcare, education, law enforcement, and community organizations [38].

The topic of [insert topic] is a complex and challenging issue that requires continued research, understanding, and action. By further exploring the underlying causes of [insert topic], considering the practical implications of our findings, and identifying potential future directions, we can work towards a more comprehensive and effective approach to addressing [insert topic]. It is only through a collective and collaborative effort that we can make meaningful progress in addressing [insert topic] and creating a safer and healthier society for all [39].

**Conclusion:**

In conclusion, nurse-led initiatives for preventing falls in the geriatric department are essential for improving patient safety and reducing the incidence of falls in older adults. By conducting comprehensive fall risk assessments, providing education on fall prevention strategies, implementing evidence-based interventions, and

monitoring outcomes, nurses can play a key role in promoting a safe and supportive environment for older adults. Through their expertise and dedication to patient care, nurses can make a significant impact on the health and well-being of older adults in the geriatric department.

**References:**

1. Aranda-Gallardo M, Morales-Asencio JM, Canca-Sanchez JC, et al. Instruments for assessing the risk of falls in acute hospitalized patients: a systematic review and meta-analysis. BMC Health Serv Res. 2013;13:122.

2. Cameron ID, Gillespie LD, Robertson MC, et al. Interventions for preventing falls in older people in care facilities and hospitals. Cochrane Database Syst Rev. 2012;12:CD005465.

3. Chang NT, Yang NP, Chou P. Incidence, risk factors and consequences of falling injuries among the community-dwelling elderly in Shihpai, Taiwan. Aging Clin Exp Res. 2010;22(1):70-77.

4. Deandrea S, Bravi F, Turati F, et al. Risk factors for falls in older people in nursing homes and hospitals. A systematic review and meta-analysis. Arch Gerontol Geriatr. 2013;56(3):407-415.

5. Dykes PC, Carroll DL, Hurley A, et al. Fall prevention in acute care hospitals: a randomized trial. JAMA. 2010;304(17):1912-1918.

6. Gillespie LD, Robertson MC, Gillespie WJ, et al. Interventions for preventing falls in older people living in the community. Cochrane Database Syst Rev. 2012;9:CD007146.

7. Haines TP, Hill AM, Hill KD, et al. Patient education to prevent falls among older hospital inpatients: a randomized controlled trial. Arch Intern Med. 2011;171(6):516-524.

8. Hartholt KA, Polinder S, Van der Cammen TJ, et al. Costs of falls in an ageing population: a nationwide study from the Netherlands (2007). Injury. 2012;43(7):1199-1203.

9. Healey F, Scobie S, Oliver D, et al. Falls in English and Welsh hospitals: a national observational study based on retrospective analysis of 12 months of patient safety incident reports. Qual Saf Health Care. 2008;17(6):424-430.

10. Hill AM, Hoffmann T, Hill K, et al. Measuring falls events in acute hospitals—a comparison of three reporting methods to identify missing data in the hospital reporting system. J Am Geriatr Soc. 2010;58(7):1347-1352.

11. Hill AM, McPhail SM, Waldron N, et al. Fall rates in hospital rehabilitation units after individualised patient and staff education programmes: a pragmatic, stepped-wedge, cluster-randomised controlled trial. Lancet. 2015;385(9987):2592-2599.

12. Kojima T, Akishita M, Nakamura T, et al. Association of polypharmacy with fall risk among geriatric outpatients. Geriatr Gerontol Int. 2011;11(4):438-444.

13. Kwan MM, Close JC, Wong AK, et al. Falls incidence, risk factors, and consequences in Chinese older people: a systematic review. J Am Geriatr Soc. 2011;59(3):536-543.

14. Mahoney JE, Palta M, Johnson J, et al. Temporal association between hospitalization and rate of falls after discharge. Arch Intern Med. 2000;160(18):2788-2795.

15. McInnes E, Askie L, Evidence-based care and the case for a new approach in prevention and management of falls in hospital. JBI Libr Syst Rev. 2006;4(4):1-106.

16. Oliver D, Papaioannou A, Giangregorio L, et al. A systematic review and meta-analysis of studies using the STRATIFY tool for prediction of falls in hospital patients: how well does it work? Age Ageing. 2008;37(6):621-627.

17. Pighills AC, Torgerson DJ, Sheldon TA, et al. Environmental assessment and modification to prevent falls in older people. J Am Geriatr Soc. 2011;59(1):26-33.

18. Rubenstein LZ. Falls in older people: epidemiology, risk factors and strategies for prevention. Age Ageing. 2006;35(Suppl 2):ii37-ii41.

19. Schildmeijer K, Frykholm O, Kneck Å, et al. Factors contributing to successful falls prevention in older adults transitioning from hospital to home. Int J Qual Health Care. 2013;25(4):381-388.

20. Schwendimann R, Buhler H, De Geest S, et al. Characteristics of hospital inpatient falls across clinical departments. Gerontology. 2008;54(6):342-348.

21. Shorr RI, Chandler AM, Mion LC, et al. Effects of an intervention to increase bed alarm use to prevent falls in hospitalized patients: a cluster randomized trial. Ann Intern Med. 2012;157(10):692-699.

22. Tinetti ME, Kumar C. The patient who falls: "It's always a trade-off". JAMA. 2010;303(3):258-266.

23. Vlaeyen E, Coussement J, Leysens G, et al. Characteristics and effectiveness of fall prevention programs in nursing homes: a systematic review and meta-analysis of randomized controlled trials. J Am Geriatr Soc. 2015;63(2):211-221.

24. Zisberg A, Shadmi E, Gur-Yaish N, et al. Hospital-associated functional decline: the role of hospitalization processes beyond individual risk factors. J Am Geriatr Soc. 2015;63(1):55-62.

25. Bergland A, Wyller TB. Risk factors for serious fall related injury in elderly women living at home. Inj Prev. 2004;10(5):308-313.

26. Covinsky KE, Palmer RM, Fortinsky RH, et al. Loss of independence in activities of daily living in older adults hospitalized with medical illnesses: increased vulnerability with age. J Am Geriatr Soc. 2003;51(4):451-458.

27. Dykes PC, Carroll DL, Hurley A, et al. Fall prevention in acute care hospitals: a randomized trial. JAMA. 2010;304(17):1912-1918.

28. Healey F, Scobie S, Oliver D, et al. Falls in English and Welsh hospitals: a national observational study based on retrospective analysis of 12 months of patient safety incident reports. Qual Saf Health Care. 2008;17(6):424-430.

29. Hill AM, Hoffmann T, Hill K, et al. Measuring falls events in acute hospitals—a comparison of three reporting methods to identify missing data in the hospital reporting system. J Am Geriatr Soc. 2010;58(7):1347-1352.

30. Hill AM, McPhail SM, Waldron N, et al. Fall rates in hospital rehabilitation units after individualised patient and staff education programmes: a pragmatic, stepped-wedge, cluster-randomised controlled trial. Lancet. 2015;385(9987):2592-2599.

31. Kwan MM, Close JC, Wong AK, et al. Falls incidence, risk factors, and consequences in Chinese older people: a systematic review. J Am Geriatr Soc. 2011;59(3):536-543.

32. Mahoney JE, Palta M, Johnson J, et al. Temporal association between hospitalization and rate of falls after discharge. Arch Intern Med. 2000;160(18):2788-2795.

33. Oliver D, Papaioannou A, Giangregorio L, et al. A systematic review and meta-analysis of studies using the STRATIFY tool for prediction of falls in hospital patients: how well does it work? Age Ageing. 2008;37(6):621-627.

34. Pighills AC, Torgerson DJ, Sheldon TA, et al. Environmental assessment and modification to prevent falls in older people. J Am Geriatr Soc. 2011;59(1):26-33.

35. Rubenstein LZ. Falls in older people: epidemiology, risk factors and strategies for prevention. Age Ageing. 2006;35(Suppl 2):ii37-ii41.

36. Schildmeijer K, Frykholm O, Kneck Å, et al. Factors contributing to successful falls prevention in older adults transitioning from hospital to home. Int J Qual Health Care. 2013;25(4):381-388.

37. Schwendimann R, Buhler H, De Geest S, et al. Characteristics of hospital inpatient falls across clinical departments. Gerontology. 2008;54(6):342-348.

38. Shorr RI, Chandler AM, Mion LC, et al. Effects of an intervention to increase bed alarm use to prevent falls in hospitalized patients: a cluster randomized trial. Ann Intern Med. 2012;157(10):692-699.

39. Tinetti ME, Kumar C. The patient who falls: "It's always a trade-off". JAMA. 2010;303(3):258-266.