

FOCUS ON...

FALLS Prevention



This supplement was funded by an unrestricted educational grant from Posey. Content of this supplement was developed independently of the sponsor and all articles have undergone peer review according to *American Nurse Today* standards.

We've made gains in preventing falls, but more work remains

It takes a team to make a difference in falls prevention.

By Patricia Quigley, PhD, MPH, ARNP, CRRN, FAAN, FAANP

This year marks the 20-year milestone of the American Nurses Association's (ANA) leadership in making patient falls a nurse-sensitive indicator. In 1995, ANA's work on nurse-sensitive indicator development resulted in the Nursing Care Report Card for Acute Care. This report included falls as a nurse indicator, demonstrating that nurses play an important role in outcomes in this area.

Fast-forwarding 20 years, nurses should ask themselves, "How has our practice changed? What more needs to be done to prevent falls?" Here are a few answers to these questions.

First, the rigor of science and graded evidence-based practices that address reduction of fall risk factors (not level of risk) or injury risk has gained momentum within and across health care. However, more needs to be done to address variability, duration, and power of the research so conclusions are more generalizable.

Second, in some healthcare organizations, such as the Department of Veterans Affairs (VA), registered nurses are assessing both fall- and fall-injury risk and history as part of the admission process. This practice needs to widen to other hospitals and healthcare settings. Toolkits help with this process (see the VA

toolkit at www.patientsafety.va.gov/professionals/onthejob/falls.asp). Establishing effective strategies for implementation that will help ensure a culture change is a study area rich with opportunity.

Third, we now understand that all patients in acute-care, long-term care, and long-term acute-care hospitals as well as in home care are at risk for falls. However, at-risk populations must be emphasized to every nurse, no matter what role or setting.

Finally, as nurses, we must rely on our clinical expertise and judgment to engage in population-specific fall- and injury-prevention programs as part of an interdisciplinary team. An interdisciplinary approach is key because the evidence is clear: Fall-prevention programs that include only nurses aren't effective. It takes a team to make a difference.

The team needs to consider sobering statistics, such as these from the Centers for Disease Control and Prevention:

- In the next 13 seconds, an older adult will be treated in a hospital emergency department (ED) for injuries related to a fall.
- In the next 20 minutes, an older adult will die from injuries caused by a fall.
- Falls cause more than half (55%) of traumatic brain injuries among

children ages 0 to 14 years.

- People ages 85 and older are 10 to 15 times more likely to sustain hip fractures from falls than people ages 60 to 65.

These statistics reflect the vulnerability of those we care for and must drive changes in practice.

They should support changes to your organization's fall and fall-injury programs that are population-specific based on age group, injury risk, and gender. As a start, every organization should answer the following questions:

1. Does your organization manage falls prevention for the very young and the very old differently than for someone who's identified at risk for a fall?
2. Does your organization protect patients who are admitted because of a fall or fall while in your care ("known fallers") differently than those who are at risk of falling?
3. Does your organization implement a fall-injury risk and injury-protection program for patients who are admitted with a fall-related injury or have a history of a fall-related injury?
4. If a patient comes to your ED after a fall and is discharged (not admitted to the hospital), does your organization make a follow-up call to the patient to ask if he or she has fallen since returning home?

Your answers to these four questions will help identify areas of needed change. Read the articles in this **Focus on...Falls Prevention** section to find ideas and strategies for keeping patients safe from falls and to reduce injuries resulting from falls.

Let's hope it doesn't take 20 more years to make even greater inroads in improving patient outcomes related to falls prevention. •

Patricia Quigley is associate director for the VISN 8 Patient Safety Center of Inquiry at the James A. Haley Veterans' Hospital in Tampa, Florida.

An estimated 25,500 Americans died from falls in healthcare and community settings in 2013. Countless more suffered life-changing injuries, such as fractures, internal injuries, and traumatic brain injury. Experts estimate that more than 84% of adverse events in hospital patients are related to falls, which can prolong or complicate recovery. This article identifies risk factors for falls, explains how falls are classified, and describes how to perform a fall-risk assessment.

To monitor falls incidence in a consistent manner, healthcare professionals need to agree on the definition of a fall. A widely accepted definition is “an unplanned descent to the floor with or without injury to the patient.” The nursing diagnosis for risk of falls is “increased susceptibility to falling that may cause physical harm.”

To help identify patients’ risk factors for falls and guide interventions to prevent falls in acute-care settings, falls commonly are classified as anticipated physiologic falls, unanticipated physiologic falls, or accidental falls.

In addition, some clinicians classify risk factors as intrinsic or extrinsic. *Intrinsic* risk factors for falls—those originating within the individual—include:

- low blood pressure or orthostatic hypotension caused by standing, dehydration, or muscle weakness (most notable in the lower extremities)
- impaired mobility, unstable gait, and poor balance due to pain, musculoskeletal deformities, or neurologic disorders
- limited physical-activity endurance
- foot problems that cause pain or paresthesias (such as peripheral neuropathy)
- impaired vision due to poor depth perception, glaucoma, or cataracts.

Assessing your patients’ risk for falling

A systematic process to address patients’ fall risk can decrease or nearly eliminate falls.

By Beverly Lunsford, PhD, RN, CNS-BC and Laurie Dodge Wilson, MSN, APRN, AGPCNP-BC



Extrinsic risk factors originate outside the individual. They include conditions in the physical environment, such as poor lighting, clutter, a slippery floor due to a spill, and an uneven threshold.

Risk factors for anticipated physiologic falls

Risk factors for anticipated physiologic falls include an unstable or abnormal gait, a history of falling, frequent toileting needs, altered mental status, and certain medications. Among hospitalized older adults, about 38% to 78% of falls can be anticipated. Evidence shows that one-third of reportable falls with injuries in hospitalized older adults are linked to bathroom use; more than half are associated with medications known to contribute to falls, such as anti-anxiety and antipsychotic drugs. Also, about 40% of falls occur within 30 minutes of an hourly rounding visit by healthcare providers.

Assess the patient for diseases and disorders that affect the cardiovascular, respiratory, neurologic, or musculoskeletal system. Also consider possible effects of treatment for these diseases; many medications increase the fall risk by causing dizziness, drowsiness, or confusion. Perform a thorough medication reconciliation to identify potential high-risk drugs, including over-the-counter products (such as diphenhydramine, commonly used for allergic rhinitis or as a sleep aid). As a rule of thumb, the more medications a patient uses, the higher the fall risk due to adverse drug effects and drug-drug or drug-disease interactions. Also, make sure you're

Fall-risk assessment instruments

A systematic review of valid and reliable risk-assessment tools for acute, long-term, community, and home-support care settings found that no single tool is recommended for implementation in all settings or for all subpopulations. However, the Morse Fall Scale (MFS) and St. Thomas Risk Assessment Tool in Falling Elderly Inpatients (STRATIFY) are well validated for assessing fall risk in adults.

Healthcare providers can use the MFS to assess fall risk through multiple safety indicators, including a history of falling, secondary diagnoses, ambulatory aid, gait, and mental status. The STRATIFY Tool has five items that address risk factors for falling, including past history of falling, agitation, visual impairment affecting everyday function, need for frequent toileting, transfer ability, and mobility. STRATIFY should be used in conjunction with a clinical assessment and medication review. Preferably, the review should be done by a nurse or pharmacist using a standard list of medications, such as the Beers Criteria.



familiar with the American Geriatric Society Beers Criteria for potentially inappropriate medication use in older adults.

Risk factors for unanticipated physiologic falls

Risk factors for unanticipated physiologic falls include conditions such as seizures, syncopal episodes, and delirium. These falls may occur with a temporary change in physical or cognitive function and unfamiliar surroundings. Such falls may be unanticipated if the patient is otherwise at low risk for falls.

Direct nursing interventions toward post-fall care and preventing injury in case of another fall. Currently, no tool exists to guide nurses and other healthcare team members in assessing risk for injury from unanticipated falls. Persons ages 85 or older, those with osteoporosis, and those taking anticoagulants are at greatest risk of injury from these falls.

Risk factors for accidental falls

Accidental falls can stem from slipping, tripping, or other accidents. They're frequently linked to extrinsic factors. To help reduce risk, evaluate the physical environment continually for safety hazards. Be aware that falls in hospitals and other acute-care settings most often occur in patient rooms, when patients are alone, or when they attempt to go to the bathroom. Many hospitals are reevaluating the design of patient rooms and bathrooms to decrease environment-related falls. A redesign that enables nurses to document at the bedside rather than at a remote station provides increased patient-safety surveillance and decreases the potential for falls.

Be sure to consider assistive devices when evaluating extrinsic risk factors that can cause accidental falls. Canes, walkers, and

wheelchairs are meant to increase the patient's support and improve balance and mobility. But many patients aren't properly taught how to use them; in some cases, the device is damaged or the wrong size for the patient. In long-term care facilities, the highest incidence of falls occurs during transfers—when the patient moves from wheelchair to bed or gets up from an unbraked wheelchair. Physical therapists can help evaluate assistive devices and determine if they are the right size and are being used properly; they also can provide education on their use.

Also consider other extrinsic risk factors for accidental falls. For instance, check the patient's footwear and clothing, which can affect mobility. Are the patient's pants too long?

Fall-risk screening and assessment

Screening and assessment can help nurses and other healthcare professionals identify patients at risk for

falls. *Fall-risk screening* determines if the patient is at risk for falls and indicates whether a more in-depth multifactorial assessment should be done. *Fall-risk assessment* provides a systematic way to check for valid and reliable causes of falls in a particular patient and identify factors for which interventions are known to reduce the fall risk.

Screening

When screening patients for fall risk, check for:

- history of falling within the past year
- orthostatic hypotension
- impaired mobility or gait
- altered mental status
- incontinence
- medications associated with falls, such as sedative-hypnotics

To help reduce risk, evaluate the physical environment continually for safety hazards.

and blood pressure drugs

- use of assistive devices.

Also, be aware that patients tethered to I.V. lines or other equipment are at increased risk for falls.

Assessment

In long-term and acute-care settings, fall-risk assessment is required for all patients on admission, transfer to a new unit, after a change in the level of care or the patient's condition, and after a fall. Because falls have multifactorial causes, an interprofessional team should collaborate in the comprehensive assessment. A standard assessment combines a systematic assessment with clinical decision making, targeted interventions, care planning, and communication with other healthcare professionals.

Nearly 50 fall-risk assessment instruments exist. Typically, these tools use a scoring system that measures the cumulative effect of known risk factors. (See *Fall-risk assessment instruments*.) When selecting an assessment tool, focus on identifying key risk factors that can guide interventions to reduce or mitigate fall risk.

Some tools use a scoring system with cut-off values for patients at high risk. But even if the patient has a low score, don't let this distract you from implementing interventions to reduce the risk of falling if the patient has identifiable and preventable risks. Also, be aware that if all or many patients are placed in a high-risk category, staff may be less likely to individualize care plans when particular risks are identified for a particular patient.

Information from the assessment

guides diagnosis and implementation of a consistent plan of care. A critical step in this multifaceted process is communicating the patient's fall risk and required interventions to colleagues, the patient and family, and significant others who need to support the interventions. Using a systematic process to identify and address the fall risk can nearly eliminate anticipated falls, prevent unanticipated falls from recurring, and significantly decrease accidental falls.

Beverly Lunsford is an assistant professor in the School of Nursing at George Washington University (GW) in Washington, DC; director of GW's Center for Aging, Health and Humanities; and director of the Washington D.C. Area Geriatric Education Center Consortium. Laurie Dodge Wilson is an assistant clinical professor at GW School of Nursing.

Selected references

- Agency for Healthcare Research and Quality. Preventing falls in hospitals: a toolkit for improving quality of care. January 2013. www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/fallpxtk5.html
- American Geriatrics Society, British Geriatrics Society. AGS/BGS clinical practice guideline: prevention of falls in older persons. New York, NY: American Geriatrics Society; 2010.
- American Geriatric Society. 2012 AGS Beers criteria for potentially inappropriate medication use in older adults. www.americangeriatrics.org/files/documents/beers/2012AGSBeersCriteriaCitations.pdf
- Boushon B, Nielsen G, Quigley P, et al. How-to guide: reducing patient injuries from falls. Cambridge, MA: Institute for Healthcare Improvement; 2012. www.ihp.org/resources/Pages/Tools/TCABHowToGuideReducingPatientInjuriesFromFalls.aspx
- Centers for Disease Control and Prevention. STEADI (Stopping Elderly Accidents, Deaths and Injuries). Make STEADI part of your medical practice. Last updated May 12, 2015. www.cdc.gov/homeandrecreationsafety/Falls/steady/index.html
- Stevens JA, Phelan EA. Development of STEADI: a fall prevention resource for health care providers. *Health Promot Pract*. 2013; 14(5):706-14.
- Willy B, Osterberg CM. Strategies for reducing falls in long-term care. *Ann Longterm Care*. 2014; 2(1). www.annalsoflongtermcare.com/article/strategies-for-reducing-falls-long-term-care

Taking appropriate precautions against falls

Learn about key fall precautions for patients in acute or long-term settings.

By Patricia Quigley, PhD, MPH, ARNP, CRRN, FAAN, FAANP

Falls pose a major public health problem around the world. In the United States, unintentional falls occur in all age groups. Such falls are the leading cause of nonfatal injuries treated in emergency departments (EDs) among all age groups except ages 10-14 and 15-24, for whom these falls are the second leading cause.

Commonly called “never events,” injurious falls can cause significant morbidity and mortality. Some 3% to 20% of inpatients fall at least once during their hospital stay. Also, adults ages 65 and older account for 70% of inpatient bed days in hospitals; advanced age is an independent risk factor for falls.

We need to accept that all patients in our care are at risk for falling. For this reason, nurses who practice in any setting and care for patients of any age should be actively involved in patient safety and fall-prevention awareness and interventions. This article summarizes recommendations regarding key fall precautions for patients under the direct care of registered nurses (RNs) in acute or long-term settings. Key precautions fall into these categories:

- Follow the nursing process.
- Reduce the risk of falls.
- Protect patients from injury if a fall occurs.

Follow the nursing process

Every RN learns about the nursing process—assessment, diagnosis, outcome identification, planning, implementation, and evaluation. You must carry out all steps of this process for each patient to ensure that you’ve assessed fall risk factors and that the assessment leads to a diagnosis. Communication and collaboration among interdisciplinary team members are crucial.

The nursing process and nursing judgment—not electronic records with templated checkbox notes—should drive patient care. A primary characteristic of nursing practice is that it’s individualized for each patient. Unless you complete all the nursing process steps, individualized fall-prevention plans of care aren’t established with the patient, caregivers, and interdisciplinary team.

Reduce the risk of falls

The three main types of falls are accidental falls, anticipated physiologic falls, and unanticipated physi-

ologic falls. This article focuses on the first two. (For more information on preventing falls, including unanticipated physiologic falls, see “Assessing your patients’ risk for falling” in this special section.)

Reducing fall risk also includes surveillance. (See *Surveillance options*.)

Reducing accidental fall risk

Accidental falls can result from an unsafe environment or environmental risk factors. To reduce the risk of these falls, maintain a constant awareness of environmental safety and take the following actions:

- Eliminate slipping and tripping hazards.
- Keep the bed at the proper height during transfer and



when the patient rises to a standing position.

- Don’t keep the bed in a low position at all times.
- Check chairs, toilets, and safety grab bars for potential safety problems.
- Use proper room lighting.
- Make sure the patient wears proper footwear (not just non-skid socks).

Also, conducting environmental rounds helps nurses identify and modify environmental fall and injury risks. Such rounding provides

Surveillance options

Monitoring patients is an essential part of preventing falls and injury caused by a fall. Technology options for surveillance, such as bed and chair alarms and camera technology, continue to evolve.

As with other interventions, use of technology should be individualized to the patient; not all types of technology work for all patients. Also, plans must be put in place to evaluate the effectiveness of technology and other prevention tools.

a structured method for recording when and where risks exist, assigning responsibility to correct them, establishing resolution dates, and setting a follow-up date for resolution.

Reducing anticipated physiologic fall risk

Anticipated physiologic falls can stem from known intrinsic or extrinsic risk factors.

- *Intrinsic* risk factors include impaired vision, gait, or balance; lower-extremity sensory neuropathy; orthostatic hypotension; and confusion.
- *Extrinsic* risk factors include certain medications and mobility aids, such as canes and walkers. To identify extrinsic risk factors, perform a comprehensive multifactorial assessment. Evidence supports the use of multifactorial fall-prevention programs for reducing falls and injuries in acute-care settings.

To reduce the risk of anticipated physiologic falls, use interventions tailored to the patient's identified risk factors. For example, if the patient has elimination problems, implement anticipated toileting; for a patient with sleep deficits, suggest alternative sleep hygiene methods (listening to talking books or soft music or getting a backrub) rather than sleep medications. If the patient has impaired gait or balance, keep mobility aids within reach and provide a referral to rehabilitation services.

Protect patients from injury if a fall occurs

Recent fall-prevention toolkits have

focused on assessment and treatment of modifiable fall and injury risks, along with population-specific approaches. In other words, you should assess all patients (especially those older than age 65) for fall injury risk and history.

Be aware that interventions meant to protect patients from injury are separate and distinct from those used to prevent falls. For instance, if the patient has a history of a hip fracture, surveillance practices (for example, rounding), protective equipment (such as floor mats and hip protectors), and possibly technology (for example, video surveillance and chair alarms) should be used, regardless of the patient's score on a fall-risk screening tool. Strategies to reduce trauma and injury, such as using floor mats and hip protectors and eliminating sharp edges, have been integrated into toolkits and practice for older adults for more than 10 years. Helpful toolkits are available from multiple agencies, such as the Department of Veterans Affairs, Institute for Healthcare Improvement, Institute for Clinical Systems Improvement, Agency for Healthcare Research and Quality, and the Minnesota Hospital Association.

As nurses, we can significantly reduce the risk of falls and decrease the rates of patient falls and injuries caused by falls by using our clinical judgment and expertise, individualizing each patient's care, and broadening fall prevention to include injury risk and protection from injury.

Patricia Quigley is associate director for the VISN 8 Patient Safety Center of Inquiry at the James A. Haley Veterans' Hospital in Tampa, Florida.

Selected references

Agency for Healthcare Research and Quality. Preventing falls in hospitals: a toolkit for improving quality of care. 2013. <http://www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html>

American Nurses Association. *Nursing: Scope and Standards of Practice*. 2nd ed. Silver Spring, MD: Author; 2010.

Boushon B, Nielsen G, Quigley P, et al. *Transforming Care at the Bedside How-to Guide: Reducing Patient Injuries from Falls*. Cambridge, MA: Institute for Healthcare Improvement; 2012. www.safetyandquality.health.wa.gov.au/docs/squire/IHI%20Guide_Reducing_Patient_Injuries_from_Falls.pdf

Degelau J, Belz M, Bungum L, et al.; Institute for Clinical Systems Improvement (ICSD). *Health Care Protocol. Prevention of Falls (Acute Care)*. Bloomington, MN: ISCI; 2012.

Dykes PC, Carroll DL, Hurley A, et al. Fall prevention in acute care hospitals: a randomized trial. *JAMA*. 2001;304(17):1912-8.

Morse JM. *Preventing Patient Falls: Establishing A Fall Intervention Program*. 2nd ed. Thousand Oaks, CA; Springer Publishing Co.; 2008.

National Center for Health Statistics. 10 leading causes of injury deaths by age group highlighting unintentional injury deaths, United States—2013. 2013. www.cdc.gov/injury/images/lc-charts/leading_causes_of_injury_deaths_highlighting_unintentional_injury_2013-a.gif

National Institute for Health and Care Excellence. Falls: Assessment and prevention of falls in older people. Guideline 161. 2013. www.nice.org.uk/guidance/cg161/chapter/1-recommendations.

Oliver D, Healey F, Haines TP. Falls and fall-related injuries in hospitals. *Clin Geriatr Med*. 2010;26(4):645-92.

Shekelle PG, Wachter RM, Pronovost PJ, et al. Making health care safer II: an updated critical analysis of the evidence for patient safety practices. *Evid Rep Technol Assess (Full Rep)*. 2013;(211):1-945. www.ahrq.gov/research/findings/evidence-based-reports/ptsafetyupt.html

Spoelstra SL, Given BA, Given CW. Fall prevention in hospitals: an integrative review. *Clin Nurs Res*. 2012;21(1):92-112.

U.S. Department of Veterans Affairs. VA National Center for Patient Safety. Falls Toolkit. 2014. www.patientsafety.va.gov/professionals/onthejob/falls.asp

Williams T, Szekendi M, Thomas S. An analysis of patient falls and fall prevention programs across academic medical centers. *J Nurs Care Qual*. 2014;29(1):19-29.

Creating an environment of falls prevention

Evidence-based practice can reduce falls and fall-related injuries.

By Sharon Stahl Wexler, PhD, RN-BC, FNGNA, and Catherine O'Neill D'Amico, PhD, RN, NEA-BC

Falls are a major concern for older adults in all settings, causing significant morbidity and mortality and affecting quality of life. In the hospital, falls occur at an estimated rate of 8.9 per 1,000 patient days. About 30% to 50% of these falls cause injury. Falls increase hospital stays and may necessitate a long-term stay.

According to the Centers for Disease Control and Prevention (CDC), 22,900 older people died from fall-related injuries in 2011. Falls also are linked to depression, anxiety, and fear of falling. In persons who've fallen, the risk of falling again rises significantly. Obviously, we must put effective measures into place to prevent falls.

The literature on falls prevention is abundant, and many fall-risk assessment instruments exist. Clinical practice guidelines on reducing falls recommend a multicomponent strategy that addresses functional, physical, psy-

chological, and educational aspects of falling, individualized to each patient. Locating and reviewing these guidelines is easy, but integrating them into practice and individualizing them for each patient can prove challenging.

Efforts to improve falls prevention require a systemic approach that involves organizational change. Falls prevention should be part of

an organizational culture of evidence-based practice (EBP). EBP entails integration of clinical expertise, patient values, and the best research evidence into the decision-making process for patient care. An essential component of professional nursing practice, EBP is also a critical component of the Magnet Recognition® and Pathway to Excellence® programs of the American Nurses Credentialing Center.

Using an appropriate EBP model

Multiple models or frameworks can be used to implement EBP. The Iowa Model of Evidence-Based Practice is a trusted model that's easy to understand and use. It takes a systematic approach to analyzing a problem and gathering research to identify reasonable actions to address it, followed by practice changes to reduce recurrence of the problem, with subsequent critique and continued monitoring to sustain desired outcomes. This model can be used to develop an interdisciplinary plan to reduce falls in clinical settings.

After identifying the problem (such as a high number of falls, falls with injuries, or failure to re-



duce falls using current interventions), interdisciplinary staff from one or more units can gather the most recent falls-related literature in all fields and evaluate its suggested use in the practice setting. After this literature review and critique, the team develops a set of actions and pilots a project using fall-risk assessment and prevention actions identified in the literature that match the units' populations and settings. After a suitable interval, the interdisciplinary team evaluates desired outcomes of the EBP project. Based on results, changes to practice are introduced throughout the organization.

Two EBP falls-prevention projects

The EBP projects discussed below illustrate how organizations can integrate falls prevention into a culture of EBP.

Community hospital's med-surg unit

A med-surg unit of a suburban community hospital already had an active and effective falls-prevention program in place, with fall rates below national benchmarks. But hospital leaders wanted to reduce rates even further. The EBP project used clinical practice guidelines from the American Geriatrics Society and British Geriatrics Society, which recommend a multicomponent strategy addressing functional, physical, and psychological aspects of falling, tailored to patients' individual needs.

Clinicians partnered with the patient and engaged the patient's active participation in the falls prevention program. This multicomponent patient-engagement strategy included a safety agreement on admission and a group-walk initiative throughout the hospital stay, aimed at motivating patient participation. The

safety agreement addressed patient concerns and fall-risk education; patients were asked to sign it, further encouraging their active participation. The initiative included three 6-meter group walks daily at a self-set pace.

Since program inception, falls on this unit have decreased approximately 25% and patients' mobility has increased; no fall-related injuries have occurred. About 75% of patients participate in daily walks.

Academic medical center's rehab unit

The unit's interdisciplinary team was concerned about the number of fall-related patient injuries, but wanted to stay true to the goals of the rehab unit—helping patients regain their prehospitalization functional level and reducing overall functional impairment. As part of its EBP, the team analyzed the rehabilitation and geriatric literature for solutions related to falls prevention.

Their work led the team to develop a 1-page educational tool that targeted patients deemed unlikely to ask for help ambulating. These patients and their family members were asked to sign an agreement inviting patients to call for help when they needed to get out of bed, go to the bathroom in a hurry, reach for objects while sitting or lying in bed, or using assistive equipment. In return, staff promised to make rounds every 30 minutes to anticipate patients' needs and to answer requests for assistance immediately. Staff were empowered to use the agreement to teach patients and families about safety. The staff-patient partnership and

individualization of care have led to a significant reduction in falls with injuries on this unit.

EBP promotes positive outcomes

Outcomes achieved with both projects demonstrate that combining specific actions in an interdisciplinary environment can reduce falls and fall-related injuries. Both units continue to work within their organizations to roll their successes forward to other units, following the pattern of the Iowa Model. These initiatives illustrate how an EBP model can improve patient safety and the patient experience.

Sharon Stahl Wexler is an associate professor at Pace University College of Health Professions, Lienhard School of Nursing, in New York, NY. Catherine O'Neill D'Amico is the director of Education, Research, and Magnet Project at Mt. Sinai Beth Israel's Beatrice Renfield Division of Nursing Education and Research in New York, NY.

Selected references

- Association of Rehabilitation Nurses. *The Specialty Practice of Rehabilitation Nursing: A Core Curriculum*. 6th ed. Glenview, IL: Association of Rehabilitation Nurses; 2015.
- Centers for Disease Control and Prevention. Falls among older adults: An overview. Last updated March 19, 2015. www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html.
- Hill AM, Etherton-Bear C, Haines TP. Tailored education for older patients to facilitate engagement in falls prevention strategies after hospital discharge—a pilot randomized controlled trial. *PLoS ONE*. 2013;8(5):1-11.
- Panel on Prevention of Falls in Older Persons, American Geriatrics Society and British Geriatrics Society. Summary of the Updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. *J Am Geriatr Soc*. 2011;59(1):148-57.
- Titler MG, Kleiber C, Steelman VJ, et al. The Iowa model of evidence-based practice to promote quality care. *Crit Care Nurs Clin North Am*. 2001;13(4):497-509.
- Zavotsky K, Hussey J, Easter K, Incalcaterra E. Fall safety agreement: a new twist on education in the hospitalized older adult. *Clin Nurse Spec*. 2014;28(3):168-72.

Preventing injuries from patient falls

Learn tips for averting injuries after a fall.

By Amy L. Hester, PhD, RN, BC

While falls prevention has become standard in inpatient care, *injury* prevention has gotten less attention, both in research and everyday practice. Injuries from falls can have serious consequences in patients, ranging from minor cuts and bruises to fractures, head injury, and even death. An estimated 11,000 patients die from falls in U.S. hospitals every year.

Injurious falls were deemed a healthcare-acquired condition (HAC) by the 2005 Deficit Reduction Act, and hospitals no longer receive reimbursement for treating injuries resulting from falls occurring during hospitalization. The average cost of treating injurious falls ranges from \$24,000 to \$27,000.

More recently, the Affordable Care Act led to changes in reimbursement models. These models factor in the occurrence of HACs, including injurious falls, to incentivize hospitals to improve patient outcomes. According to current projections, the annual financial burden of injurious falls will reach \$47 billion by 2020.

Regulatory standards require hospitals to provide fall-prevention programs to patients at risk of falling. While these programs include care plans and protocols for preventing falls, they may fail to provide specific guidance or interventions for preventing injuries from falls.

Injury-prevention strategies and devices

Don't confuse fall-prevention strategies and devices with injury-prevention strategies and devices. Bed and chair alarms, lap belts, gait belts, chair wedges, and nonslip footwear are designed to prevent falls, not fall-related injuries. Injury-prevention interventions are critical components of high-quality care. They include the use of material resources, such as floor matting or compliant flooring, hip protectors, low-low beds, and helmets or protective caps.

Special flooring

Compliant flooring and floor matting provide a cushioned surface that reduces impact, decreasing the likelihood of injury if the patient falls. Compliant flooring gives under pressure. This concept is relatively new and still uncommon in inpatient care settings.

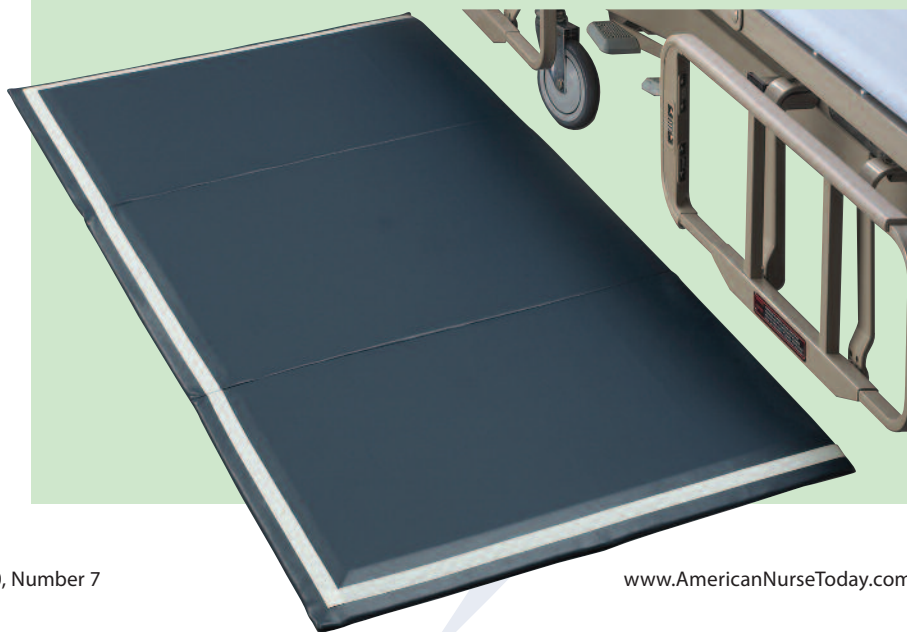
Floor matting, on the other hand, has been used in practice for several years. A mechanical engineering study of floor matting showed it reduced injury by as much as 99%. Floor matting has several advantages:

- It offers protection from both fractures and head injury.
- It's relatively inexpensive—usually less than \$150.
- It's reusable and easily cleaned between patient uses.
- It's portable, transitioning from the bedside to placement in front of chairs or other areas when patients are mobilized out of bed.

Beveled matting is preferred because it's less likely to pose a tripping hazard for nursing staff. Folding mats are preferred if storage space is scarce. (See *Flooring that helps prevent injuries.*)

Flooring that helps prevent injuries

A beveled floor mat absorbs shock and can decrease impact significantly if a patient falls. Some mats, such as the one shown here, have luminescent strips on three sides, making it easier for nurses (and patients) to see them in the dark.



Protection against hip fractures

For patients at risk for hip fracture or falling, a hip protector like the one shown here absorbs impact to help prevent injury. The soft foam pads are removable and washable.



To use floor matting effectively, staff must understand it should be placed only when the patient is left unattended. When staff members are working actively with the patient or the patient is being mobilized by staff, matting should be taken up and placed to the side.

Hip protectors

Hip protectors reduce impact from falls that could cause hip fracture. Available in briefs or pant-type options, these garments have protective pads or cushions around the lateral hip areas. They can be particularly effective for frail patients and those who have a degenerative bone disease or a low body mass index. They are inexpensive and can be stored easily in supply rooms. Although hip protectors are for single patient use, the patient can continue to wear them throughout care transitions, including discharge to the home. (See *Protection against hip fractures.*)

Low-low beds

Low-low beds keep the patient as

low to the ground as possible, reducing impact if he or she falls from the bed. Many healthcare organizations use these beds on a rental basis, although owning them is becoming more prevalent. Be aware that low-low

beds offer injury protection only if the patient falls directly from the bed.

Staff requires education to learn how to use these beds properly. When the bed is positioned all the way down, patients who are weak (especially in the quadriceps) may have trouble getting out of bed safely. Low-low beds should be raised to the appropriate height for each patient to allow safe transition out of bed.

Helmets and protective caps

Helmets and protective caps protect the head from impact during a fall. Several varieties are available, ranging from full head-hard shell helmets to vented foam helmets to caps with protective impact polymers. Cost varies by type, ranging from about \$35 to \$150.

These devices typically are for

single-patient use. Like hip protectors, helmets travel well with the patient throughout care transitions. Helmets and protective caps can be particularly useful and effective in patients at risk for head bleeds secondary to coagulopathies. Head protection should be a serious consideration in patients who are receiving anticoagulants or have liver disease, elevated partial thromboplastin times, or low platelet counts secondary to oncologic therapies.

Right resource, right patient, right time

Knowing the purpose of each material resource and when and how to use it is crucial to implement these devices effectively in preventing and managing falls and injuries. Routine inservice education from vendors and standardized orientation of new staff to all devices used in patient care can improve compliance in their use. To standardize implementation of these resources, healthcare organizations should provide clinical decision support through care plans and protocols that address when to use appropriate material resources. Providing the right resource to the right patient at the right time is critically important.

Amy L. Hester is director of nursing research and innovation at the University of Arkansas for Medical Sciences Medical Center in Little Rock, Arkansas.

Selected references

- Bowers B, Lloyd J, Lee W, Powell-Cope G, Baptiste A. Biomechanical evaluation of injury severity associated with patient falls from bed. *Rehabil Nurs*. 2008;33(6):253-9.
- Currie L. Chapter 10: Fall and injury prevention. In: Hughes RG, ed. *Patient Safety and Quality: An Evidence-based Handbook for Nurses*. Rockville, MD: Agency for Healthcare Research and Quality; 2008. http://archive.ahrq.gov/professionals/clinicians-providers/resources/nursing/resources/nurse_shdbk/CurrieL_FIP.pdf
- Wu S, Keeler EB, Rubenstein LZ, Magliore MA, Shekelle PG. A cost-effectiveness analysis of a proposed national falls prevention program. *Clin Geriatr Med*. 2010;26(4):751-66.

A roadmap to effective falls prevention

*F*ollow the signposts from 1 to 4 to prevent falls.

- Prevent injuries.
- Consider using floor mats, beds, and such protective devices as helmets.

4

3

- Take fall precautions.
- Provide a safe environment.
- Address physiologic factors, such as impaired vision.

2

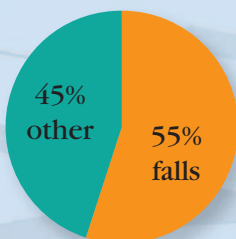
- Identify patients at risk.
- Consider risk factors for anticipated physiologic falls, unanticipated physiologic falls, and accidental falls.
- Screen all patients for injury risk and fall-related injury history.

1

- Create the right environment.
- Use evidence-based practice.
- Engage staff and patients.
- Measure outcomes.

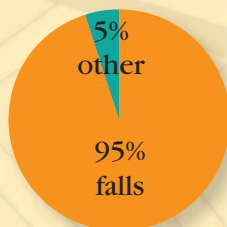
Fast facts

In the next **20 minutes**, an older adult will die from injuries caused by a fall.

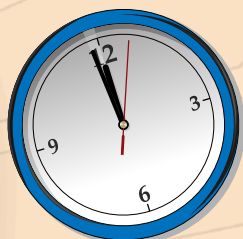


Causes of **traumatic brain injuries** in children (0 to 14 years)

Causes of **hip fractures**



In the next **13 seconds**, an older adult will be treated in a hospital emergency department for injuries related to a fall.




Unintentional falls are the leading cause of nonfatal injuries treated in emergency departments for all age groups except ages 10-14 and 15-24. For those age groups, falls came in second.




Resources

Three key resources for preventing falls and protecting patients from injuries:

 Agency for Healthcare Research and Quality. Preventing falls in hospitals: a toolkit for improving quality of care. 2013. www.ahrq.gov/professionals/systems/hospital/fallpxtoolkit/index.html

 Boushon B, Nielsen G, Quigley P, et al. Transforming Care at the Bedside How-to Guide: Reducing Patient Injuries from Falls. Cambridge, MA: Institute for Healthcare Improvement; 2012. www.safetyandquality.health.wa.gov.au/docs/squire/IHI%20Guide_Reducing_Patient_Injuries_from_Falls.pdf

 U.S. Department of Veterans Affairs. VA National Center for Patient Safety. Falls Toolkit. 2014. www.patientsafety.va.gov/professionals/onthejob/falls.asp