

## FALL PREVENTION

Falls have been studied extensively in elderly persons, and statistics are often grim. The cliché “Old age starts with the first fall and death comes with the second” is an exaggeration, but sadly, it has a ring of truth to it.

Each year, over 350,000 people are hospitalized for hip fracture in the United States. Ninety percent of these fractures are the result of falls. Hip fracture is a devastating injury for persons of all ages, particularly those who are elderly. Only one in four recovers completely, 40% will require nursing facility care, 50% will need a cane or walker, and 24% of those over age 50 will die within 12 months.

### Fall risk

Three primary risk factors account for the majority of falls in long-term care facilities:

- Patients over age 65
- History of previous falls
- Cognitive impairment

Many other risk factors contribute to and increase residents’ risk of falling, including the following medical conditions:

- Vascular disorders (stroke, hypertension)
- Neuromuscular disorders (Parkinson’s disease)
- Musculoskeletal disorders (arthritis, osteoporosis)
- Neurological disorders (seizures)
- Sensory loss (poor vision or hearing)
- Balance and inner ear problems
- Lung diseases
- Bowel or urinary urgency or incontinence

Proper management of these conditions can lessen the side effects that make residents prone to falling. For residents with sensory loss, ensure that their eyeglasses, hearing aids, etc., are functioning correctly and are being used consistently.

Lifestyle risks also exist, including:

- Inadequate nutrition
- Excessive alcohol intake
- Inactivity

Nutrition has a significant impact on residents’ general health and well-being. Older people have a greater need for nutrient-dense foods since they often consume fewer calories than younger adults. Feed residents food rich in calcium, vitamin D, vitamin C for bone mass, and protein for muscle strength. Diet and activity should be monitored closely to fill any gaps that may result in muscle or bone weakness, reduced flexibility, etc.

Although not every resident will be able to participate, exercises focused on developing postural control have been shown to reduce fall risk, and strength and flexibility development aid in reducing injuries.

Certain medications may increase fall risk, such as:

- Drugs that affect thought processes (sedatives, tranquilizers, antipsychotics)
- Antianxiety or antidepressant drugs
- Drugs that increase GI/GU motility (diuretics, laxatives, cathartics)
- Use of multiple medications (usually four or more)

It is critical to be aware of the potential side effects of these kinds of drugs and how they may affect residents. Consider the possibilities of alternative drugs or nonpharmaceutical treatments to reduce the number of medications and troubling side effects. At a minimum, an annual review of every resident’s medications with an eye toward fall reduction is essential.

Dementia-related risks include:

- Wandering
- Agitation
- Perceptual difficulties
- Balance impairments
- Poor judgment

Even those residents with quite severe dementia are often able to cooperate to a surprising degree with interventions. Never assume that a resident can’t comply with a modification just because he or she is cognitively impaired. Changing a walking aid to something more appropriate or wearing suitable shoes may make a big difference in improving mobility. The use of warning systems, such as pressure-sensitive pads that go under the bed mattress or door alarms, may be necessary for residents who wander.

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### Assessment and planning

Residents are at high risk of falls and other injuries during the first week of admission, when they are new to the facility. Occasionally, the first fall causes serious injury, but often a resident experiences more than one fall with no injuries before a fracture or other serious damage occurs.

No risk screening tool alone will identify all at-risk populations or risk factors. Take a fall history on admission. Don't wait until the MDS and other risk assessments are performed to care plan the fall risk. Many of the risk factors discussed earlier, such as medical conditions, medication use, and history of falls, can and should be identified at the time of admission.

Other factors to consider once the resident has been admitted include the following:

- **Wheelchair fit.** There is no one-size-fits-all wheelchair. Physical and occupational therapists can recommend wheelchairs for residents with special needs. They can also measure residents for proper wheelchair fit. Improperly fitting wheelchairs increase the risk of falls and make mobility much more difficult. Restraints and restraint alternatives are often necessary if a wheelchair does not fit. Considering each resident's fall risk individually and developing a personalized plan of care may take more time, but in the long run doing so protects both the resident and the facility.
- **Need for assistive ambulation devices and exercise programs.** Restorative nursing programs that improve range of motion, strengthen the resident, or improve mobility also increase safety. These programs are often overlooked in long-term care facilities.

### Consider the environment

Consider environmental modifications in resident rooms, if necessary, to prevent falls. Many modifications can be made in residents' rooms for little or no cost. When assessing a resident's room or other common areas, be aware of the following risks:

- Clutter occurs anywhere people live. A piece of clothing, a dropped magazine, a pen that fell out of somebody's pocket—even if these things remain on the floor for only a minute or two, that can be long enough to cause a fall.

- Spills are a major cause of accidental falls. All it takes is a small amount of liquid on the floor for a few seconds for someone to slip and fall.
- Furniture arrangement is an issue, particularly when residents are allowed to arrange their own furniture. This can be a problem in any care environment, in both common areas and private living spaces, especially if somebody rearranges the furniture in a new or unfamiliar pattern.
- Carpets that are too thick, floors that are too slick, and changes in flooring types from one room to another can all be responsible for falls.
- Lighting that is too low is a risk factor for falls, as is lighting that is too bright, creates glare, or skews the way objects look.
- Trailing cords from electrical devices, such as vacuum cleaners, can cause falls.
- Temperature affects fall risk in two ways. People with orthostatic hypotension should avoid hot environments, as the heat can result in vasodilatation and a drop in blood pressure. On the other hand, cold temperatures can make stiff joints even more inflexible. Maintaining a moderate temperature is best for prevention of these complications.

### Fall response

Rapid and appropriate response to a fall can mean the difference between a correctable problem and a fatal one, for a variety of reasons:

- Only a brief time on the floor can lead to additional complications, such as shock or further injury
- It is necessary in determining the cause of the fall and preventing future falls
- It establishes crucial assessment data, such as level of consciousness, which will help determine the type of treatment needed

When a resident falls, a number of variables must be determined as soon as possible. The answers to the following questions will indicate how to respond:

- Why did the resident fall? If the resident fell because of a cardiac or neurological problem, such as a heart attack, blood pressure drop, or stroke, injuries from the fall may be the least of your concerns.

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It is more important to recognize that a medical problem has occurred and to respond appropriately.

- What injuries have occurred? Falls are responsible for many fatal brain injuries in long-term care residents. Even a seemingly minor bump on the head can cause dangerous bruising or bleeding in the brain. Find out whether the resident lost consciousness, even for a moment, either before or after the fall.

- Ask about any pain.
- Look for asymmetry of limbs or extremities.
- Check range of motion of extremities.
- Watch for anything unusual in appearance or behavior.

**Witnessed and unwitnessed falls**

If a CNA is assisting a resident and senses the resident is about to fall, the CNA should pull the resident toward him or her, supporting the resident under the arms. The CNA should then bring his or her outside leg back a step for support and gently slide the resident down the angled front leg. After checking to ensure that the resident sustained no immediate, serious injuries, follow facility procedures for checking vital signs, getting help, and returning the resident to bed.

Resident assessment is easier if the fall is witnessed because the cause of the fall may be known and whoever witnessed the fall will know whether the resident hit his or her head. However, even if the fall was witnessed, the resident must be fully evaluated for injury.

If a staff member reaches a resident after a fall has occurred, he or she must quickly assess the resident. While conducting a post-fall assessment, follow these key steps:

- Assess the resident: What is wrong? What is the most severe problem?
- Assess the situation: What caused the problem?
- Remove the resident from any immediate danger.
- Provide and maintain comfort and keep the resident immobile.
- Check for responsiveness and ask the resident what happened.
- Check vital signs.
- Inspect for injuries, including scrapes, cuts, bruising, broken bones, bleeding, etc.

**Residents still may fall**

Even with the right interventions in place, a resident still may fall. For residents who continue to fall despite risk management efforts, facilities and caregivers should consider additional tactics to prevent or reduce the severity of injuries as the result of these falls.

The only nonpharmacological intervention proven to prevent hip fractures is a hip protector, if consistently used. An individual who falls while wearing a hip protector rarely sustains a hip fracture.

Although effective, these devices can be difficult to use and caregivers must be educated in their use and involved in helping residents be compliant. This is particularly important when working with the cognitively impaired. A person who needs a hip protector should have three to five protectors on hand for rotating use.

Consider a personal alert system for any frequent faller who might fall and be unable to call for help or reach a call light. Most of these systems include an electronic device worn on the neck or arm, such as a necklace or bracelet, that transmits an alert when activated. This alarm can be part of the facility's paging system, or it can transmit to a separate monitor kept at the attendants' station. ■

**Questions? Comments? Ideas?**

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*Mark the correct response.*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Which of the following is not one of the three primary risk factors of falls in long-term care facilities?
  - a. Over age 65
  - b. History of falls
  - c. Trailing cords from electrical devices
  - d. Cognitive impairment
  
2. Wandering and agitation are examples of \_\_\_\_\_-related risks.
  - a. drug
  - b. dementia
  - c. lifestyle
  - d. arthritis
  
3. Residents are at high risk of falls during the first week of admission, when the resident is new to the facility.
  - a. True
  - b. False
  
4. Rapid response to a fall can mean the difference between a correctable problem and a fatal one because \_\_\_\_\_.
  - a. only a brief time on the floor can lead to additional complications, such as shock or further injury
  - b. it is necessary in determining the cause of the fall and preventing future falls
  - c. it establishes crucial assessment data, which will help to determine the type of treatment needed
  - d. All of the above
  
5. \_\_\_\_\_ should be monitored closely to identify any gaps that may lead to muscle or bone weakness.
  - a. Age
  - b. Diet
  - c. Activity
  - d. Both b & c
  
6. Maintaining a \_\_\_\_\_ room temperature is best for prevention of medical-related complications that increase fall risk.
  - a. hot
  - b. cold
  - c. moderate
  - d. None of the above
  
7. If a CNA is assisting a resident and notices the resident is about to fall, the CNA should pull the resident toward him or her, supporting the resident \_\_\_\_\_.
  - a. under the arms
  - b. around the waist
  - c. by holding the resident's clothing
  - d. by the shoulders
  
8. Consider \_\_\_\_\_ for any frequent faller who might fall and be unable to call for help or reach a call light.
  - a. restraints
  - b. medication
  - c. a personal alert system
  - d. no additional measures are needed
  
9. A resident does not need to be fully evaluated if the fall is witnessed.
  - a. True
  - b. False
  
10. At a minimum, how often should every resident's medications be reviewed with an eye toward fall reduction?
  - a. Weekly
  - b. Monthly
  - c. Every six months
  - d. Annually