

Prevalence of Falls

Patient falls make up a large number of all sentinel events.

According to a Joint Commission review of sentinel events (1995 to 2007):

- Falls are the 6th leading cause of sentinel events.
- Falls account for 5.8% of all sentinel events.

**In the healthcare setting,
1 out of every 20 sentinel events
is a patient fall.**

Fall Outcomes

Falls can be devastating.

Potential outcomes when a patient falls include:

- Head trauma
- Fracture, including hip fracture
- Soft tissue injury



Fall Outcomes: Fatal & Non-Fatal

The injuries that happen in a fall can be fatal, especially among the elderly.

In non-fatal falls, injuries may lead to:

- Permanent disability
- Decrease in physical function
- Reduced quality of life

In addition, patients who fall may lose confidence or develop a fear of falling. This can result in:

- Further functional decline
- Depression
- Feelings of helplessness
- Social isolation



Where and When Falls Occur

Most falls occur from or near the bed.

Falls also may occur when the patient is:

- Walking
- Transferring (for example, from chair to toilet)
- Sitting on the toilet or in a chair or wheelchair

Some falls are dramatic. Examples include:

- When a patient falls down a staircase or laundry chute
- When a patient falls from a window, roof, or balcony



Summary

You have completed the lesson on basic facts about falls.

Remember:

- Falls account for 5.8% of all sentinel events.
- In long-term care, falls account for 42% of sentinel events.
- Falls are most common among the elderly.
- Falls can result in death or permanent disability.
- Falls also can lead to a decrease in quality of life due to loss of confidence and fear of falling.
- Most falls occur from or near the bed.

Balance

Balance is the ability to keep a center over a base of support.

In the human body, balance comes from several different systems. If any one of these systems is impaired, balance may be impaired.

This impairment increases the likelihood of falls.



Summary

You have completed the lesson on balance.

Remember:

- In the human body, balance comes from the following systems: sensory systems, nervous system, and musculoskeletal system. If any of these systems is impaired, balance may be impaired.
- Sensory systems that play a role in balance are: the visual system, the vestibular system, and the somatosensory system. Each system provides a different type of information important for maintaining balance.
- The body uses three major muscle strategies to correct losses in balance. These are: the ankle strategy, the hip strategy, and the stepping strategy.

Risk Factors: Aging

Aging causes changes in every system of the body.

These changes can:

- Affect balance
- Increase the risk of falls

On the following screens, let's take a closer look at the effects of aging on the primary systems responsible for balance.

Remember: These systems are the:

- Nervous system
- Musculoskeletal system
- Sensory systems



Other Risk Factors

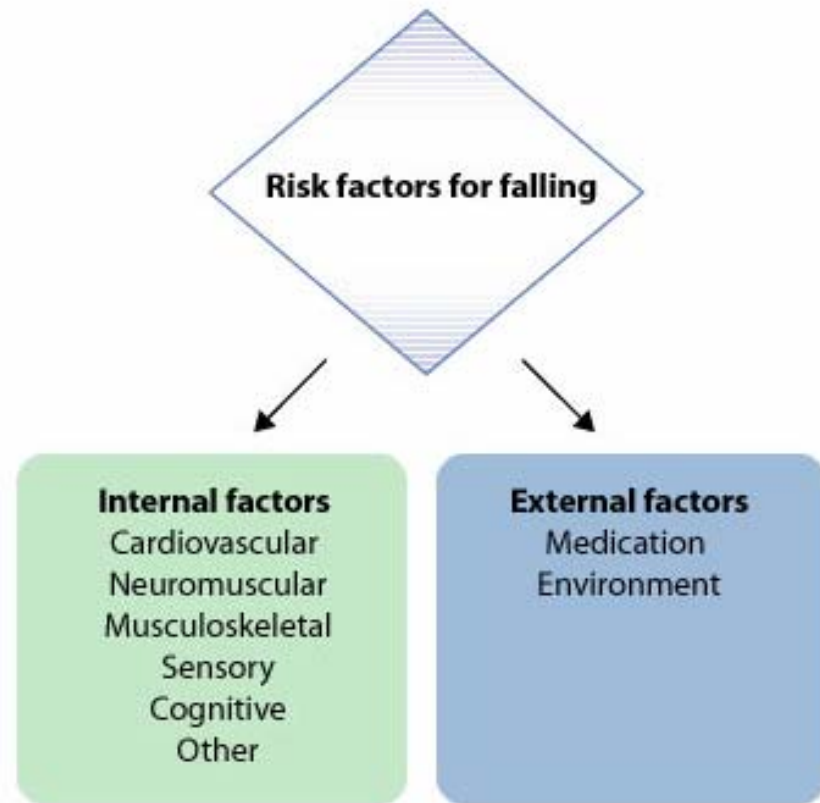
In addition to aging, many other factors can increase the risk of falling.

These factors fall into two broad categories:

- Internal factors
- External factors

Note that many of the internal factors are more common in older patients. This further emphasizes the role of age as a risk factor.

Let's take a closer look at these factors on the following screens.



Internal Risk Factors: Cognitive

Impaired mental status includes:

- **Confusion**
- **Disorientation**
- Impaired memory
- Inability to understand

This is a major risk factor for falls. In the Joint Commission study of 22 fatal falls discussed in lesson 2, 17 of the 22 patients had an altered mental status.

Causes of impaired mental status include:

- Delirium
- Cognitive decline
- Alzheimer's disease or other dementia
- Chronic mental illness
- Intoxication
- Stroke



Internal Risk Factors: Other

Other internal risk factors include:

- Lack of physical activity
- Personal history of falls

Finally, risk is increased in patients with conditions such as:

- Urinary incontinence
- Urinary urgency
- Diarrhea

These conditions increase the likelihood that a patient will try to move:

- More quickly than he or she can safely move
- Without waiting for needed assistance

External Risk Factors: Medication: Riskiest Drugs

Medication is a major risk factor for falls.

Psychoactive drugs are especially likely to increase fall risk. These drugs include:

- Sedatives
- Tranquilizers
- Anti-anxiety drugs
- Antidepressants



External Risk Factors: Medication: Other Drugs

Other drugs that may increase risk of falls are:

- **Anticoagulant** drugs
- **Diuretics**
- **Beta-blockers**
- Other drugs with a side effect of dizziness, unsteadiness, or low blood pressure

Patients also are at risk if they take:

- More than four prescription drugs
- Certain combinations of drugs



External Risk Factors: Environmental

Environmental risk factors for falling include:

- Recent environmental change
- Wet or otherwise slippery floors
- Uneven surfaces
- Inadequate lighting or glare
- Clutter
- Incorrect bed height
- Poorly maintained or fitted wheelchairs



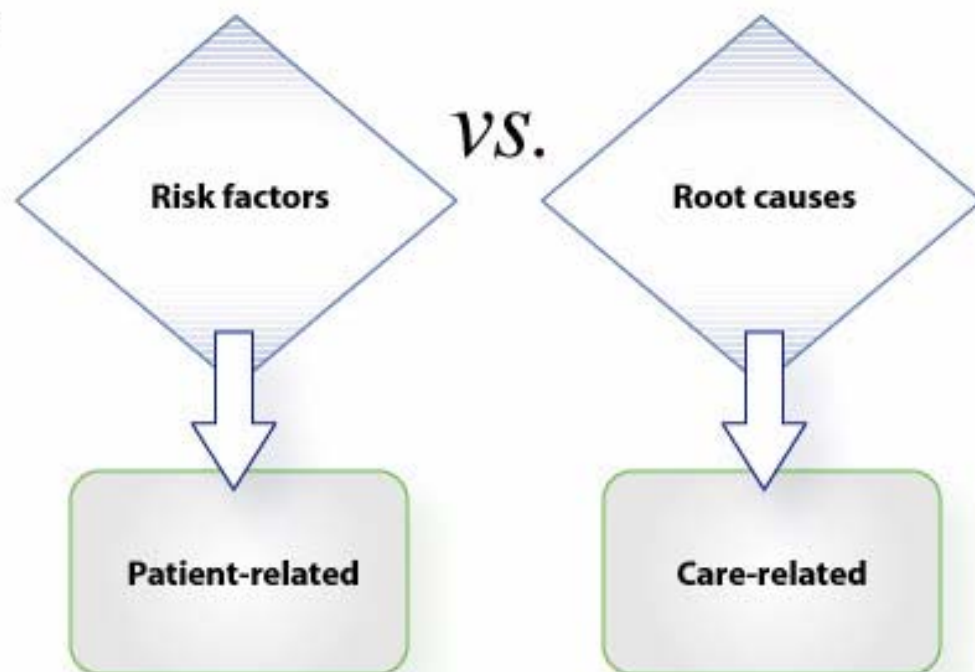
Root Causes

In the Joint Commission study of 22 fatal falls, certain root causes were identified.

Note that **risk factors** for a problem (such as falling) generally have to do with the patient.

By contrast, **root causes** of a problem have to do with:

- Care processes in a facility
- Caregivers
- The environment of care
- Organizational culture



Root Causes: Communication

In the Joint Commission study, 50% of organizations identified ineffective communication as a significant root cause of falls.

Communication-related causes included the following:

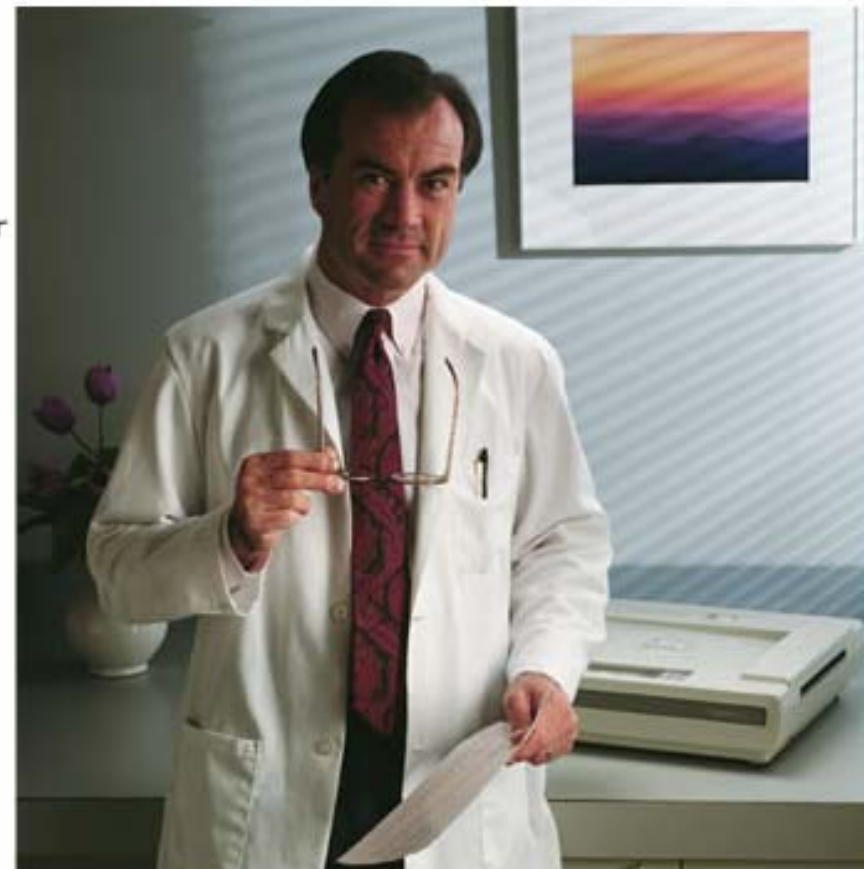
- Staff failed to communicate patient information when "handing off" the patient.
- Staff failed to document changes in patient condition in the medical record.
- Family members failed to inform caregivers of a patient condition or history of falling.

Ineffective communication is a frequent cause of many sentinel events.

Root Causes: Other

Forty-one percent of organizations also identified the following root causes of falls:

- Incomplete patient assessment or reassessment
- Incomplete plan of care or protocol
- Environment-of-care issues such as design of windows, door locks, or nurse's stations



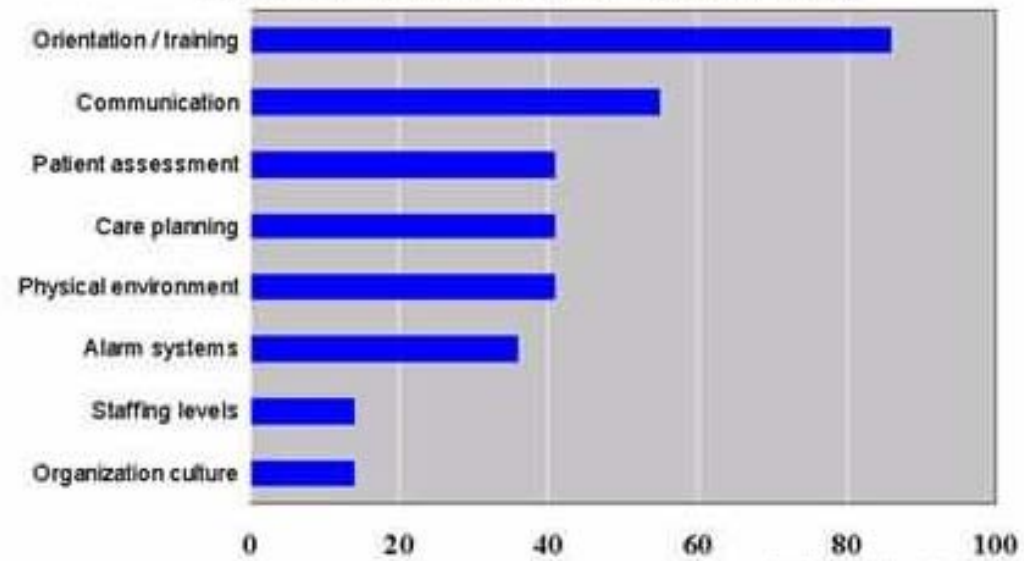
Root Causes

The Joint Commission performed a separate analysis of patient falls occurring between 1995 and 2002.

The following root causes were identified:

- Orientation/training
- Communication
- Patient assessment
- Care planning
- Physical environment
- Alarm systems
- Staffing levels
- Organizational culture

Root Causes of Patient Falls (1995 - 2002)



Credit: <http://www.jcaho.org>

Summary

You have completed the lesson on fall risk factors and root causes.

Remember:

- Mental status and medication are the most significant risk factors for falls.
- Age is an important risk factor for falling.
- Other important **internal** risk factors include weakness, functional decline, and sensory impairment.
- Important **external** risk factors include environmental hazards.
- Frequent root causes of patient falls relate to communication and staff training.

Multidisciplinary Approach

As we have seen, many factors contribute to fall risk.

For this reason, fall prevention requires:

- Various interventions
- A multidisciplinary approach



Multidisciplinary Approach: Communication

To succeed, any multidisciplinary approach must include regular communication between disciplines.

This includes:

- Physicians
- Pharmacists
- Physical and occupational therapists
- Nurses
- Other staff

In other words:

- To prevent falls, the healthcare team must discuss at-risk patients regularly.



Fall Risk Assessment: Who

The following patients should be assessed for fall risk:

- All patients, upon admission or transfer to a specific department
- All post-operative patients
- All confused and elderly patients, especially at bedtime
- All patients taking analgesics, sedatives, or other drugs that may cause drowsiness, decreased blood pressure, dizziness, or confusion
- All patients who fall or have a history of falls
- Patients with functional or mobility problems or balance impairment

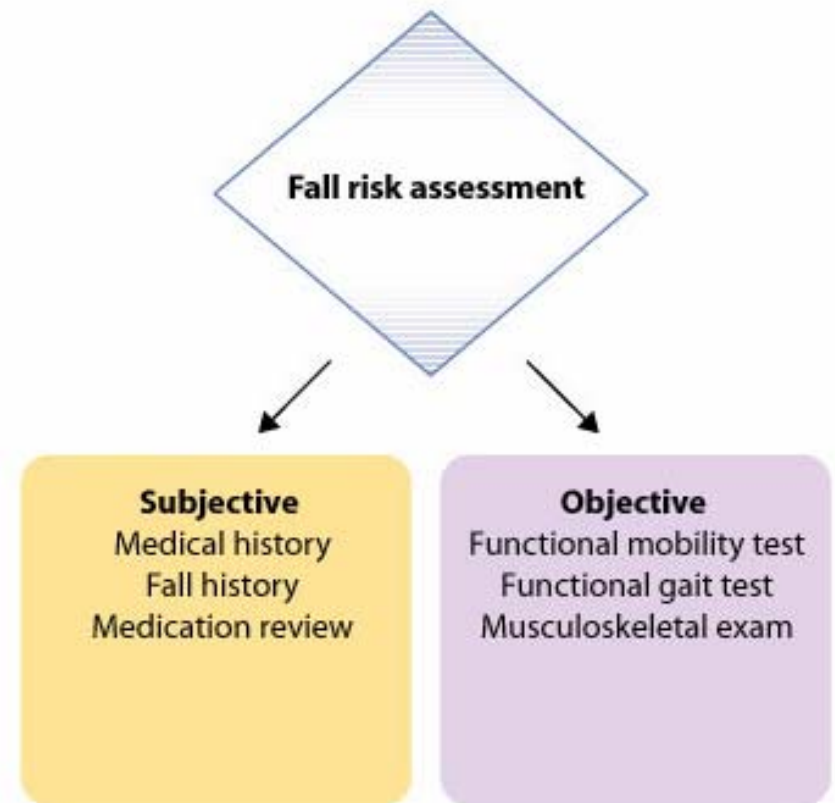


Fall Risk Assessment: How

Fall risk assessment may include:

- Subjective assessment
- Objective assessment

Let's take a closer look at each on the following screens.



Intervention

After an assessment, appropriate steps should be taken to prevent falls.

Reducing the risk of patient harm because of a fall is one of The Joint Commission's National Patient Safety Goals. This goal requires hospitals to:

- Implement a fall prevention program
- Evaluate the results of the program



For more information, see the [National Center for Patient Safety Falls Toolkit](#)

Intervention: All At-Risk Patients: Awareness

Caregivers should be alerted to all at-risk patients.

This may be done by documenting an appropriate diagnosis in the medical record. For example:

- "At risk of falling"
- "Potential for injury"

At-risk patients also may be identified by:

- Colored identification bands
- Colored stickers on their doors



Intervention: All At-Risk Patients: Education

All at-risk patients should be educated about the risk of falls during hospitalization. Family members also should be educated.

Give patients basic ideas for minimizing risk. For example:

- Change position slowly
- Call for help in moving



Interventions: Patients with Impaired Mobility

Specific interventions may be used for patients with:

- Weakness
- Gait problems
- Limited range of motion
- Other mobility problems

These patients should:

- Wear non-skid footwear
- Rise slowly
- Transfer and/or walk only with appropriate assistance

These patients also should have physical conditioning, physical therapy, and/or rehabilitation to:

- Improve strength and endurance
- Correct gait and/or balance abnormalities
- Improve range of motion



Interventions: Patients with Altered Mental Status

Patients with altered mental status also can benefit from specific interventions.

Examples are:

- Orient all new patients to the facility upon admission. Reorient confused patients as necessary.
- Ask family members to sit with confused patients.
- Place confused patients in low beds, near the nurse's station.



Interventions: Patients with Altered Mental Status: Bed Rails

Bed rails and other restraints are sometimes used to help prevent falls. This is especially common among patients with altered mental status.

However, restraints do **not** reduce the risk of falls and fall injuries, according to the National Center for Injury Prevention and Control.

In fact, restraints may actually **increase** fall-related patient injury and death. This is because restraints limit movement. Therefore, they lead to muscle weakness and reduced physical function.

If bed rails are required to prevent falling out of bed:

- Split bed rails should be used.
- The rail at the head of the bed should be kept up. This keeps the patient from rolling out of bed.
- The rail at the foot of the bed should be kept down. This way, the patient does not have to climb over a rail to get out of bed.

*Restraints may actually **contribute** to fall-related injuries and deaths by limiting movement, resulting in decreased physical function.*



Interventions: Patients with Special Toileting Needs

To help prevent falls in patients with incontinence, urgency, or diarrhea:

- Evaluate and treat incontinence, if possible
- Place patients with urgency in rooms near toilets.
- Patients taking laxatives and diuretics should be checked regularly.
- At-risk patients should be taken to the toilet routinely.



Intervention: Patients with Drug Risks

Medications should be reviewed for:

- Any patient taking a high-risk drug
- Any patient taking more than four prescription drugs

Medication review should include looking at the benefits and risks of each drug.

Decisions may then be made about the possibility of decreasing or discontinuing drugs. For preventing falls, drug use should be decreased as much as possible, as consistent with the patient's other clinical needs.

Patients taking high-risk drugs should be educated on:

- The effects of these drugs
- The risk of falls



Bedside Intervention

Most falls occur at or near the bed.

To make beds safer for at-risk patients:

- Provide low beds.
- Keep bed brakes locked.
- Make sure the patient can reach all necessary items from bed.
- Keep the bedside free of clutter.
- Do not use full bed rails (as described earlier in the lesson).



Environmental Interventions

To decrease fall risk by changing the environment:

- Improve lighting. This includes nightlights at beds and toilets.
- Install grab bars and handrails.
- Raise toilet seats.
- Stabilize furniture that patients might use for balance.
- Minimize obstacles and clutter, especially at the bedside.
- Provide chairs at an appropriate height for sitting and rising.
- Use chairs with armrests and latex mesh seats to prevent slipping.
- Use safety straps or seatbelts in chairs and wheelchairs.
- Fit wheelchairs properly.
- Maintain wheelchairs in good working order.
- Install or check bed alarms.
- Install self-latching locks on utility room doors.
- Restrict window openings.
- Install alarms on exit doors.
- Improve and standardize nurse call systems.



Summary

You have completed the lesson on assessment and intervention.

Remember:

- Patients should be assessed for fall risk.
- Fall risk may be assessed both subjectively and objectively.
- After fall risk is assessed, an appropriate fall prevention program should be put in place. It should be evaluated for effectiveness.
- Certain strategies may be appropriate for all patients at risk for falls.
- Other interventions depend on the nature of the patient's risk factors.
- Most falls occur at or near the bed. The bedside should always be kept as safe as possible.
- Many environmental modifications can help decrease fall risk for patients.