

# Quick Reference Guide: Linking Interventions to Risk Factors – Expanded Version

This document may be used to support staff education for the clinical-decision-making skills needed to create an individualized plan of care to best meet a given patient's fall risk reduction needs. While some fall risk reduction interventions are appropriate to use with all patients, others are more appropriate to use when specific risk factors are present.

Page 2 of this document includes a table showing common fall risk factors that appear on many standardized fall risk assessment tools along with a list of fall risk reduction interventions to consider for each risk factor. Multiple sections follow on pages 3-12 that provide additional detail about each fall risk factor category and interventions to consider, along with a rationale for why certain interventions might help address a given risk factor. Links are provided for some interventions when additional information about that intervention is available on the [CAPTURE Falls Roadmap](#).

This document is *not* meant to suggest that all possible interventions listed for a specific risk factor need to be used at the same time for a patient with that risk factor. Further, many patients present with multiple risk factors for falling, so multiple interventions across risk factor categories may be appropriate for a given patient. The list of interventions is also not intended to be all-inclusive. There may be additional interventions appropriate for a given patient that do not appear in this document. Lastly, it's worth recognizing that some interventions can be used to address multiple fall risk factors.

# Linking Interventions to Fall Risk Factors

Use this table to identify interventions appropriate for all patients (universal interventions) as well as those to consider for patients with specific risk factors.

Interventions	Fall Risk Factors						
	All Patients (Universal Interventions)	Cognitive or Behavioral Impairment	Difficulty with mobility and/or ADLs	Medications	Risk of Injury	Sensory Impairment	Toileting Needs
Assistive devices/ equipment			●			●	●
Bed and/or chair alarm		●					
Bed in low position	●				●		
Bedside floor mats					●		
Call light and belongings in reach	●						●
Declutter environment	●						
Delirium prevention or mitigation		●					
Documentation of mobility/ADL assistance			●				
Floor clean and dry	●						
Gait/transfer belt			●		●		
Handoff to communicate risk		●	●	●	●	●	●
Handrails in bathroom, hallways, etc.	●						
Hearing aids						●	
Hip protectors					●		
Locked wheels on bed and wheelchair	●						
Medication review by pharmacy		●	●	●	●		●
Night lights/supplemental lighting	●					●	
Nonslip, well-fitting footwear	●		●				
Occupational therapy evaluation			●			●	●
Orthostatic blood pressure monitoring				●			
Pain management	●						
Patient/family education	●	●	●	●	●	●	●
Patients placed close to nurses station		●					
Physical therapy evaluation			●			●	●
Purposeful hourly rounding	●	●					●
Seating assessment			●				
Sitter		●					
Supervised mobility and/or ADLs		●	●				
Supervised toileting		●	●		●		●
Video monitoring		●					
Visible identification of risk		●	●	●	●	●	●
Vision correction						●	
Top bedrails up	●						

## All Patients (Universal Interventions)

Anyone can fall if conditions pose a risk (e.g., tripping over an obstacle on the floor). Universal interventions are steps that a hospital can take to keep all patients safe from falling, regardless of whether a patient was identified at risk upon completion of a fall risk assessment. Universal interventions reduce the risk of falling not only for patients, but also visitors and staff. Universal interventions focus largely on reducing risks in the physical environment but also address how patients interact with the environment and staff. Many are common sense steps to keep patients safe.

<b>Intervention Options</b>	<b>Rationale</b>
Bed in low position	Reduce the chance the patient will fall from a high surface if they leave the bed unassisted.
Call light and personal belongings (e.g., phone, water, tissues, etc.) within reach	Reduce the chance the patient will leave the bed or chair unassisted.
Declutter environment	Reduce trip hazards for patients, visitors, and staff.
Floor clean and dry	Reduce slip hazards for patients, visitors, and staff.
Handrails in bathrooms, hallways, etc.	Assist the patient's balance during transfers and walking. Provide support during transfers or ambulation and promote independence by reducing reliance on staff.
Locked wheels on hospital bed and wheelchair	Provide a sturdy surface from which the patient can transfer or when adjusting their position or posture.
Night lights/supplemental lighting	Improve the patient's ability to use vision for balance and see potential obstacles in their path.
Non-slip, well-fitting footwear	Reduce slip and trip hazards. Assist the patient's balance by increasing traction and grip on various surfaces.
<a href="#">Patient/family education</a>	Familiarize patients and family with the environment and how to work with staff to reduce fall risk.
<a href="#">Purposeful hourly rounding</a>	Proactively address the patient's needs (e.g., hygiene, adjusting positioning, etc.) to reduce the chance they will get up unassisted.
Top bedrails up	Provide support that the patient can use to assist themselves with bed mobility and a visual demarcation for the edge of the bed.

## Cognitive or Behavioral Impairments

Some patients have cognitive or behavioral impairments, such as impaired memory, impulsivity, or confusion. These impairments may contribute to lack of insight into how to reduce their risk of falling, making other risk factors (e.g., [mobility impairments](#) or [toileting needs](#)) even more challenging to address. These impairments may be long-standing for the patient or may be acute changes due to the patient's current medical condition. They may also stem from medication side effects or problems with nutrition or hydration. Interventions directed at cognitive or behavioral impairments seek to either reduce or compensate for these impairments to the extent possible.

Intervention Options	Rationale
Bed and/or chair alarm	Alert staff when a patient attempts to leave the bed or chair unassisted due to impulsivity or not remembering or understanding they may need assistance with mobility.
<a href="#">Delirium prevention or mitigation</a>	Reduce confusion due to delirium. Delirium is a sudden change in mental status that can occur in hospitalized older adults leading to confusion or disorientation.
<a href="#">Handoff to communicate risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient, including how the patient's cognitive and behavioral status is impacting their fall risk and interventions currently being used to mitigate that risk.
<a href="#">Medication review by pharmacy</a>	Address medication side effects that may be contributing to a patient's current cognitive or behavioral state and/or treat the patient's symptoms.
<a href="#">Patient/family education</a>	Simplify communication to better match a patient's cognitive or behavioral status. Ensure that family members understand the patient's fall risk and help reinforce staff education with the patient.
Patient placed close to nurses' station	Staff are in closer proximity to monitor the patient, communicate with the patient, and react quickly should a patient be unreliable in using a call light and/or a bed and/or chair alarm sounds.
<a href="#">Purposeful hourly rounding</a>	Proactively address a patient's needs to reduce the chance they will get up unassisted, especially if the patient has cognitive or behavioral impairments which may lead to less insight into their fall risk.
Sitter	Provide close monitoring of a patient to better address the patient's needs and reduce the chance they will get up unassisted.
<a href="#">Supervised mobility and/or activities of daily living</a>	Provide close monitoring and/or physical assistance to a patient as needed to reduce fall risk or assist a fall, should one occur.
<a href="#">Supervised toileting</a>	Provide close monitoring and/or physical assistance to a patient as needed to reduce fall risk or assist a fall, should one occur. While there are competing tensions between patient privacy and safety when it comes to toileting, the bathroom is an important place for staff to provide supervision and assistance due to the difficulty patients may have with transferring and managing clothing, as well as multiple hard surfaces that can cause injury in the event of a fall. Patients with cognitive or behavioral impairments may not reliably use the call light and attempt hygiene, clothing management, or transfers on their own, increasing the risk of a fall.

Video monitoring	Alert staff when patient attempts to leave bed or chair unassisted. Video monitoring allows trained staff to observe and anticipate potentially unsafe behavior, such as a patient preparing to get out of bed. This enables a proactive response before the patient actually attempts to exit, compared to a bed and/or chair alarm, which does not alert staff until after a patient has exited the bed or chair.
Visible identification of risk	Use of signage, colored bracelets, and/or socks to help all staff visually identify if a patient is at risk for falls.

# Difficulty with Mobility and/or Activities of Daily Living

Some patients have weakness, or gait or balance impairments that make it unsafe to engage in independent ambulation, transfers, or ADLs such as dressing. These impairments may be long-standing for the patient or may be acute changes due to a patient's current medical condition. They may also stem from [medication side effects](#). Interventions directed at difficulty with mobility or ADLs seek to either reduce or compensate for these challenges.

<b>Intervention Options</b>	<b>Rationale</b>
Assistive devices/equipment	Devices and equipment make mobility and ADLs easier and safer for the patient and staff. Examples include (but are not limited to) walkers, canes, wheelchairs, commodes, dressing equipment, and mechanical transfer devices.
Documentation of mobility/ADL assistance	Promotes understanding among staff for how to best assist a given patient. Documentation within the medical record can be supplemented by signage within the patient's room to quickly share information about a patient's mobility status.
<a href="#">Gait/transfer belt</a>	Provides staff with a point of contact near the patient's center of mass to more safely and effectively assist a patient with mobility or ADLs, or control a fall, should one occur.
<a href="#">Handoff to communicate fall risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient, including any assistive devices or equipment the patient should use, or specific techniques to assist the patient with transfers and mobility.
<a href="#">Medication review by pharmacy</a>	Address medication side effects that may be contributing to a patient's current difficulty with mobility and/or ADLs. Alternatively, a pharmacist may have recommendations for medications to safely address impairments such as pain that may be interfering with a patient's mobility and/or ADLs.
Nonslip, well-fitting footwear	Reduce slip and trip hazards. Assist the patient's balance by increasing traction and grip on various surfaces. Impaired mobility and balance may be compounded by poorly fitting footwear.
Occupational therapy evaluation	Occupational therapists assess and train patients in the performance of ADLs such as dressing, grooming, bathing, and toileting. This may include the use of various pieces of equipment. OTs also provide recommendations to other hospital staff and the patient's family for how to most effectively and safely assist patients with various tasks.
Pain management	Safe management of pain, either by pharmacological or non-pharmacological means, can enhance a patient's ability to engage in mobility and ADLs.
<a href="#">Patient/family education</a>	Help patients and families understand why patients may need assistance and how to safely engage in mobility and ADLs.
<a href="#">Physical therapy evaluation</a>	Physical therapists assess and train patients in the performance of mobility tasks such as transfers and ambulation. This may include the use of various pieces of equipment and the performance of exercises to reduce impairments interfering with mobility. PTs also provide recommendations to other hospital staff and the patient's family for how to most effectively and safely assist patients with mobility.

<a href="#">Seating assessment</a>	Proper sitting posture and comfort can improve a patient's sitting balance, reduce the chance they will attempt to change positions unassisted, and ease a patient's ability to transfer in and out of a chair. Physical and occupational therapists can make recommendations on proper seating options for a given patient.
<a href="#">Supervised mobility and/or activities of daily living</a>	Provide close monitoring and/or physical assistance for a patient as needed to reduce fall risk or assist a fall, should one occur.
<a href="#">Supervised toileting</a>	Provide close monitoring and/or physical assistance for a patient as needed to reduce fall risk or assist a fall, should one occur. While there are competing tensions between patient privacy and safety when it comes to toileting, the bathroom is an important place for staff to provide supervision and assistance due to the difficulty patients may have with transferring and managing clothing, as well as multiple hard surfaces that can cause injury in the event of a fall. This also ensures that patients use necessary equipment and appropriate transfer techniques that reduce their risk of falling.
Visible identification of fall risk	Use of signage, colored bracelets, and/or socks helps all staff visually identify if a patient is at risk for falls.

## Medications

Medications, while intended to cause a positive change in the patient's medical status, often come with side effects that may increase a patient's risk of falls. These side effects may include, but are not limited to, sedation, cognitive changes, impaired balance, orthostatic hypotension, or urinary or gastrointestinal effects. Pharmacists play an important role in reviewing a patient's current medications and making recommendations for change to reduce risk of falls if possible.

<b>Intervention Options</b>	<b>Rationale</b>
<a href="#">Handoff to communicate fall risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient, including any medication side effects that are contributing to the patient's risk of falling.
<a href="#">Medication review by pharmacy</a>	Address medication side effects that may be contributing to fall risk. Provide recommendations for medications that may be used to treat issues potentially contributing to fall risk (e.g. pain, anxiety, gastrointestinal symptoms).
<a href="#">Orthostatic blood pressure monitoring</a>	Determine if orthostatic hypotension is contributing to a patient's fall risk and if a review of related medications is needed.
<a href="#">Patient/family education</a>	Help patients and families understand what side effects may occur with patient medications and how these side effects relate to fall risk.
Visible identification of fall risk	Use of signage, colored bracelets, and/or socks helps all staff visually identify if a patient is at risk for falls.

## Risk of Injury

Despite our best efforts, some patients will fall. Therefore, it is also appropriate to consider interventions that reduce a patient's risk of injury, in the event a fall occurs. An easy way to think about injury risk is the ABCs (age, bone, coagulation, and surgery).

<b>Intervention Options</b>	<b>Rationale</b>
Bed in low position	Lowering the height a patient may fall from if they leave the bed unassisted will help attenuate force to reduce the risk of fracture and bruising.
<a href="#">Bedside floor mats</a>	Attenuate force to reduce risk of fracture and bruising if the patient attempts to leave the bed unassisted and falls.
<a href="#">Handoff to communicate risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient. Reducing the risk of a fall itself, through clear staff communication, reduces the risk of injury.
<a href="#">Hip protectors</a>	Redirect or attenuate force at the hip to reduce risk of fracture if a patient falls.
<a href="#">Medication review by pharmacy</a>	Some medications, while necessary to prevent blood clots, may place the patient at higher risk of internal bleeding in the event of a fall. A pharmacist can help appropriately manage the use of anticoagulants and assess for the need to adjust other medications which may contribute to fall risk.
<a href="#">Patient/family education</a>	Help patients and families understand potential consequences of falls such as bruises, abrasions, sprains, fractures, or brain injuries.
<a href="#">Supervised toileting</a>	Provide close monitoring and/or physical assistance for a patient as needed to reduce fall risk or assist a fall, should one occur. While there are competing tensions between patient privacy and safety when it comes to toileting, the bathroom is an important place for staff to provide supervision and assistance due to the difficulty patients may have with transferring and managing clothing, as well as multiple hard surfaces that can cause injury in the event of a fall.
Visible identification of risk	Use of signage, colored bracelets, and/or socks helps all staff visually identify if a patient is at risk for falls.

## Sensory Impairment

Some patients have impairments in visual, vestibular, and somatosensory systems that negatively impact their balance during [mobility and activities of daily living](#). Others have hearing or visual impairments that may make patient education more challenging. These impairments may be long-standing for the patient or may be acute changes due to the patient's current medical condition.

<b>Intervention Options</b>	<b>Rationale</b>
Assistive devices/equipment	Devices and equipment make mobility and ADLs easier and safer for the patient and staff by helping patients compensate for impairments in sensory systems needed for balance. Examples include (but are not limited to) walkers, canes, wheelchairs, commodes, dressing equipment, and mechanical transfer devices.
<a href="#">Handoff to communicate risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient, including any sensory impairment(s) the patient has (e.g., visual, auditory, etc.) that may affect fall risk or the patient's ability to communicate, the severity of the sensory impairment, and current strategies to compensate for the sensory impairment
Hearing aids	The use of devices to enhance hearing can make patient education and communication with the patient more effective.
Night lights/supplemental lighting	Improve the patient's ability to use vision for balance and see potential obstacles in their path.
Occupational therapy evaluation	Occupational therapists (OTs) assess and train patients in the performance of activities of daily living, such as dressing, grooming, bathing, and toileting. This training often includes ways to compensate for sensory impairments that may interfere with the safety of these tasks. Additionally, some OTs are specially trained in rehabilitation strategies for people with low vision.
<a href="#">Patient/family education</a>	Communication strategies during patient education may need to be adapted to compensate for hearing or visual impairment. Examples include use of written communication for a patient with impaired hearing, or increased font size for written education materials for a patient with impaired vision.
<a href="#">Physical therapy evaluation</a>	Physical therapists assess and train patients in the performance of mobility tasks such as transfers and ambulation. This training often includes ways to compensate for sensory impairments that may interfere with the safety of these tasks. Additionally, physical therapists are trained in vestibular rehabilitation.
Visible identification of risk	Use of signage, colored bracelets, and/or socks helps all staff visually identify if a patient is at risk for falls.
Vision correction	Ensuring a patient consistently wears their eyewear will assist them to more effectively use their vision for balance and mobility.

# Toileting Needs

Some patients have incontinence, or urgency of bowel or bladder, causing them to hurry to the bathroom. For some, this problem can be compounded by [mobility impairments](#) that make ambulating to the bathroom or transferring on/off a toilet or commode challenging. These impairments may be long-standing for the patient, or acute changes due to the patient's medical condition. [Medication side effects](#) could even be contributing to the problem.

Intervention Options	Rationale
Assistive devices/equipment	Devices and equipment make mobility and activities of daily living (ADLs) easier and safer for the patient and staff. Examples that can specifically assist with toileting needs include (but are not limited to) commodes, hand-held urinals, and elevated toilet seats.
Call light and personal belongings within reach	Allows the patient to easily call for assistance when needing to use the bathroom, or more readily use equipment related to bathroom needs (e.g., a handheld urinal).
<a href="#">Handoff to communicate risk</a>	Transfer important information about a patient's fall risk to another staff member caring for that patient, including typical frequency of toileting, medication side effects that may affect toileting needs, and mobility impairments, including whether the patient can ambulate to the bathroom or use a bedside commode, and any assistive devices needed.
<a href="#">Medication review by pharmacy</a>	Address medication side effects that may be contributing to bladder or bowel dysfunction. Alternatively, a pharmacist may have recommendations for medications that may improve bladder or bowel issues.
Occupational therapy evaluation	Occupational therapists (OTs) assess and train patients in the performance of ADLs. Specific to toileting, this includes transfers, clothing management, and personal hygiene. Training may include the use of various pieces of equipment to ease the completion of the ADLs. OTs can also provide recommendations to other hospital staff and the patient's family for how to most effectively and safely assist the patients with these tasks.
<a href="#">Patient/family education</a>	Help patients and families understand what they can do and what staff will do to address a patient's toileting needs.
<a href="#">Physical therapy evaluation</a>	Physical therapists (PTs) assess and train patients in the performance of mobility tasks such as transfers and ambulation. PTs can also provide recommendations to other hospital staff and the patient's family for how to most effectively and safely assist the patients with mobility. Additionally, specific to issues of incontinence, some physical therapists have specialized training in pelvic floor rehabilitation.
<a href="#">Purposeful hourly rounding</a>	Purposeful hourly rounding (i.e., a toileting schedule) can proactively address a patient's need to use the toilet, so it can help reduce problems with urgency or incontinence.
<a href="#">Supervised toileting</a>	Provide close monitoring and/or physical assistance for a patient as needed to reduce fall risk or assist a fall, should one occur. While there are competing tensions between patient privacy and safety when it comes to toileting, the bathroom is an important place for staff to provide supervision and assistance due to the difficulty patients may have with transferring and managing

	clothing, as well as multiple hard surfaces that can cause injury in the event of a fall.
Visible identification of risk	Use of signage, colored bracelets, and/or socks helps all staff visually identify if a patient is at risk for falls.