بسم الله الرحمن الرحيم

Falls

Dr. Fatemeh sadat mirzadeh
Geriatric medicine specialist

Case presentation

- A male in his mid-sixties presented to his local emergency department (ED) with complaints of shortness of breath and chest pain.
- He had a history of chronic obstructive pulmonary disease (COPD) and cardiovascular disease (CVD).
- The patient was admitted to the hospital for exacerbation of COPD symptoms and atypical chest pain.

Case presentation

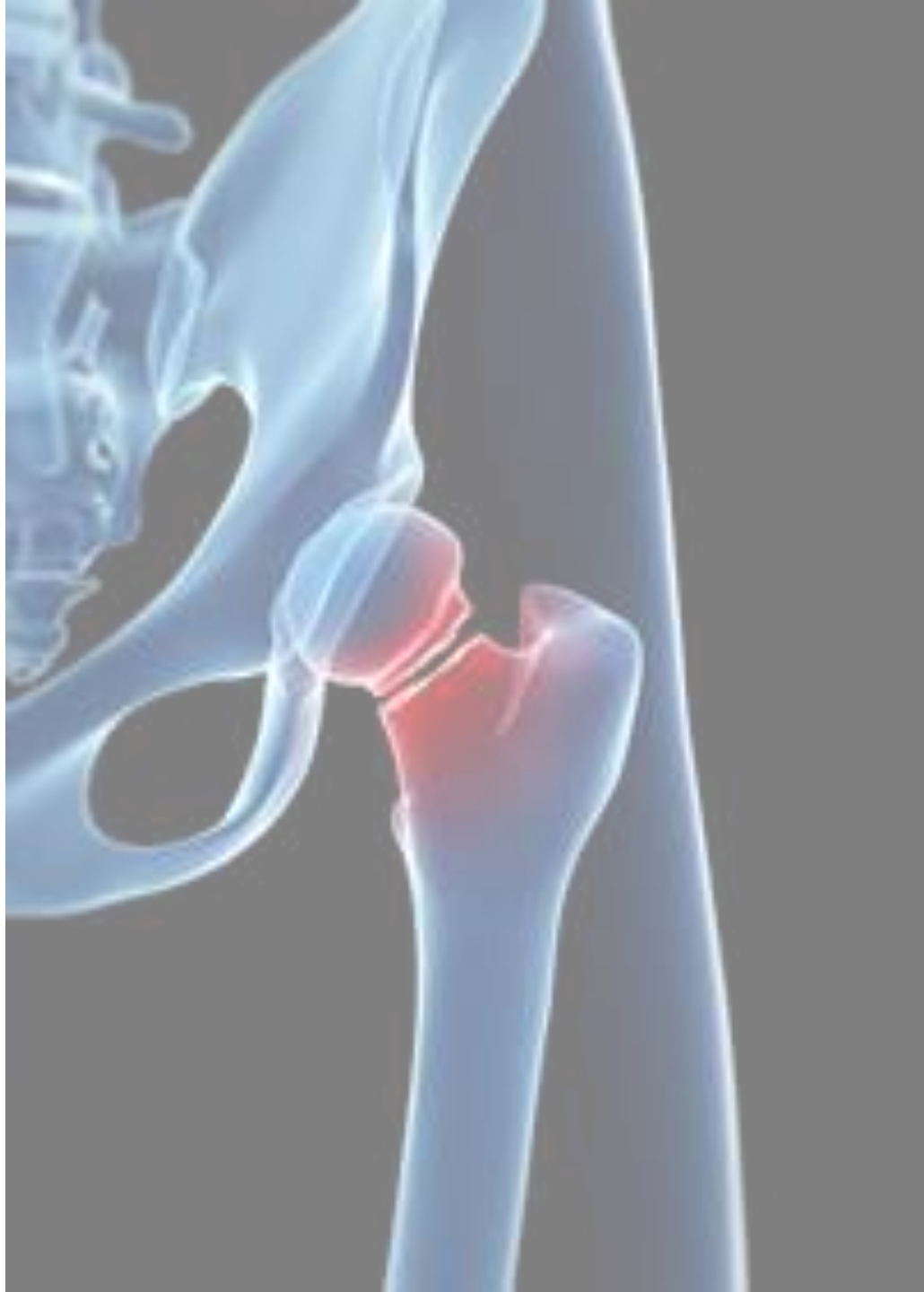
- At various times, the patient was noted to be a fall risk, and he fell twice while in the acute care area of the hospital.
- After the patient was transferred to the hospital's rehabilitation unit, he was found on the floor and diagnosed with a fractured hip.
- The patient stated that he tried to contact a nurse for help to the bathroom, but no one responded.
- The patient's wife alleged that he was overmedicated with acetaminophen/hydrocodone and zolpidem.

Case presentation

- No visible reminders were in place to alert staff that the patient was a fall risk (e.g., signage or a wristband).
- An order stipulated that the patient should receive zolpidem at 19:00.
- The nurse documented that zolpidem was administered at 19:30; however, the hospital pharmacy software automatically assigned 21:00 on the medication sheet because hospital policy stipulated that zolpidem should be administered at 21:00, and any deviation required pharmacy approval.
- The nurse claimed that she had checked on the patient 15 minutes prior to his fall and he was sleeping.

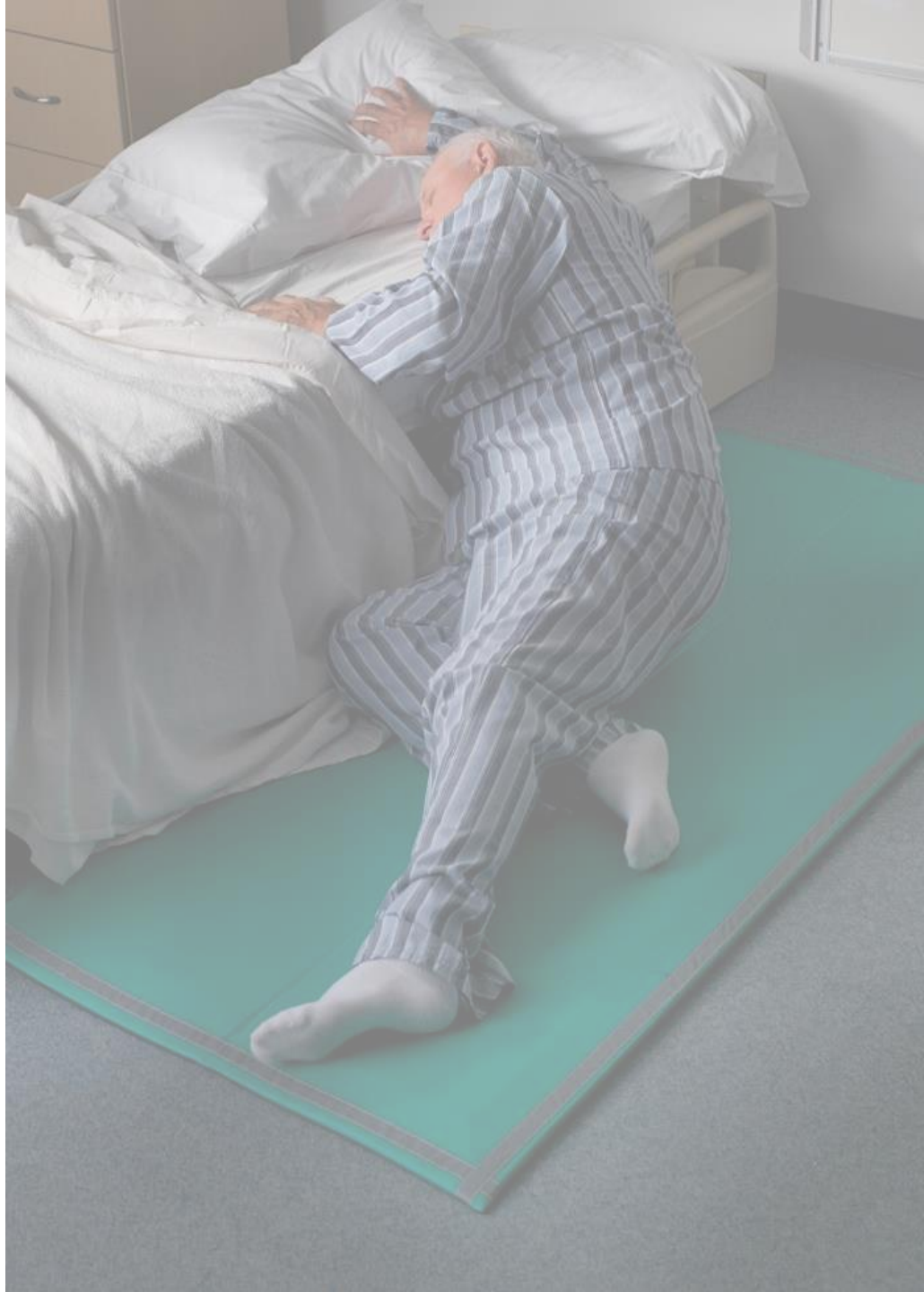
Case presentation

- Ultimately, the patient underwent surgical hip repair.
- After additional rehabilitation, the patient was discharged and returned home. However, he died 2 weeks later.
- A malpractice suit was filed alleging improper management of the patient’s medication regimen and failure to monitor the patient’s physiological status.



Case presentation

- During litigation, the patient's primary care physician testified that he spoke to the patient the morning after he fell.
- At that time, the patient told the physician that he used the call light to request assistance getting to the bathroom, but nobody responded.
- As a result, the patient attempted to get out of bed on his own and got caught in cords and wires that were attached to him, causing him to fall.
- Further, during testimony, a nursing expert noted several additional safety issues, including no bedside commode, bed alarm, signage on the door, or sitter to watch the patient.



Summary

- What are patient falls?
- Why worry about patient falls?
- Plan of action to reduce patient falls
- Case Study
  - Medication/ Reassessment

Definition

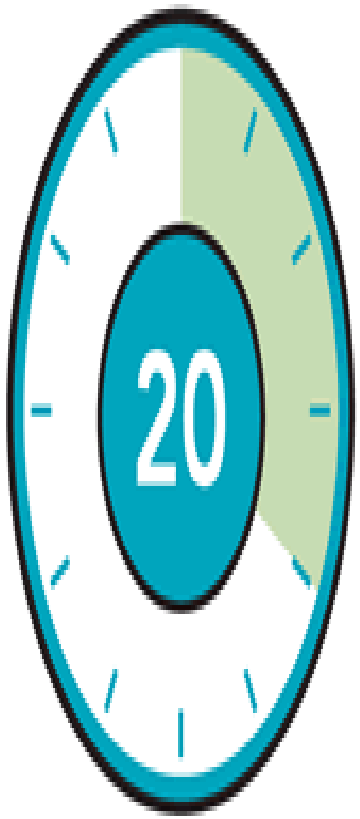
- A fall is “an event which results in a person coming to rest inadvertently on the ground or floor or other lower level.”

- In community settings fall incidence rates:
  - 32% to 40% in people aged 65 or more
  - 40% to 50% in people beyond the age of 75

- In residential aged care facilities (RACFs) fall incidence rates:
  - 30% and 56%

- In hospital, with incidence rates ranging between:
  - 2% in general hospitals
  - 27% in acute hospital geriatric wards


age 65+
age 72+
age 80+
1 out of 3 people falls each year
fall every two years
fall every year



Every 20 minutes

an older adult dies from a fall in the United States. Many more are injured.

Take a stand to prevent falls

STEADI Stopping Elderly Accidents, Deaths & Injuries

CDC

OLDER ADULT FALLS
Startling Statistics

1 second

An older adult falls every second of every day.

1 in 4

One in four older adults reported a fall in 2014.

#1 cause

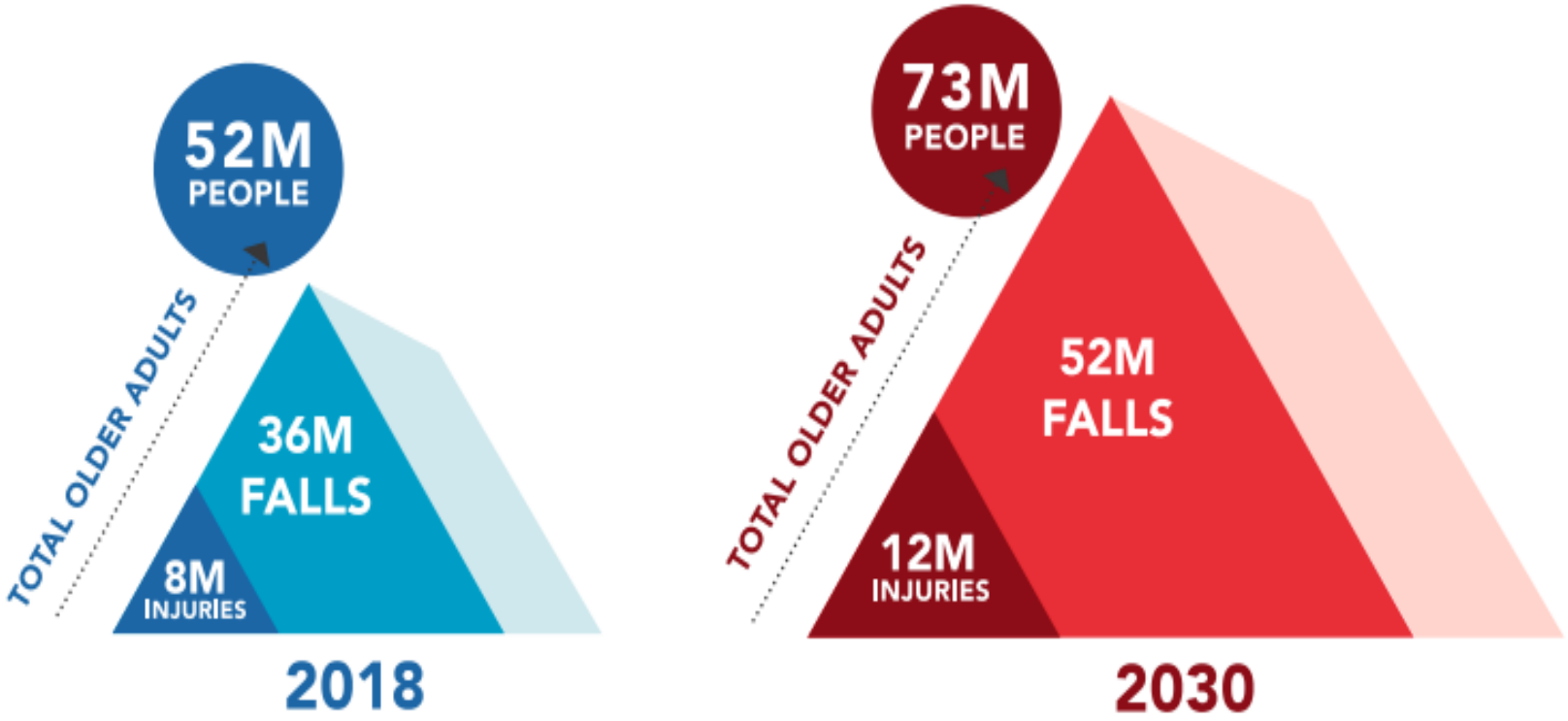
Falls are the #1 cause of hip fractures.

STEADI Stopping Elderly Accidents, Deaths & Injuries

www.cdc.gov/steadi

Falls are not a normal part of aging & most falls can be prevented!

Epidemiology

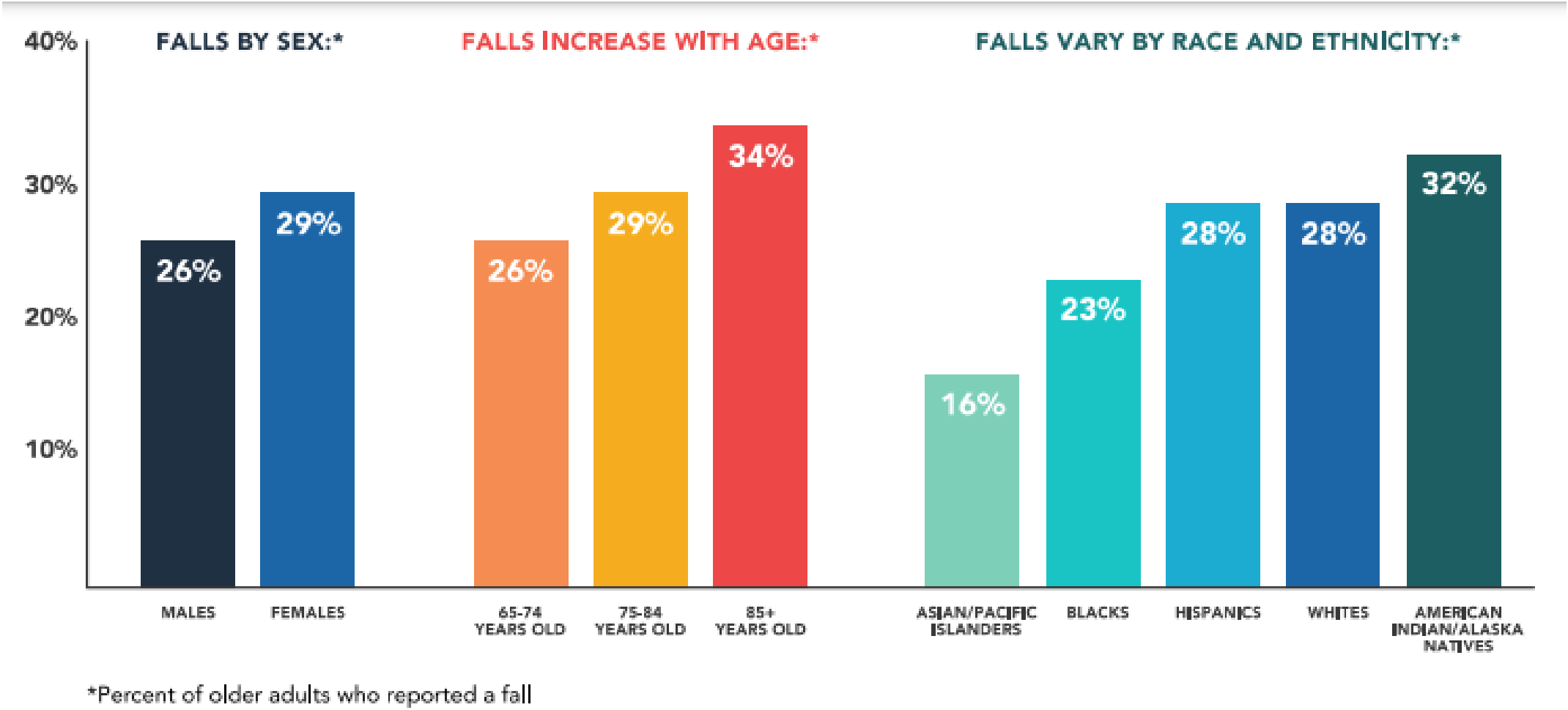


Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

STEADI Stopping Elderly Accidents, Deaths & Injuries

2020

All adults, aged 65 and over, are at risk for a fall. Older adults more likely to fall include females, those 85 and older, and American Indian and Alaska Natives.



*Percent of older adults who reported a fall

Falls in hospital

- Falls are a common and devastating complication of hospital care, particularly in elderly patients.

- Epidemiologic studies have found that falls occur at a rate of 3–5 per 1000 bed-days, and the Agency for Healthcare Research and Quality estimates that 700,000 to 1 million hospitalized patients fall each year.

- Patients in long-term care facilities are also at very high risk of falls.

Falls in hospital

- More than one-third of in-hospital falls result in injury, including serious injuries such as fractures and head trauma.

- Death or serious injury resulting from a fall while being cared for in a health care facility is considered a never event, and the Centers for Medicare and Medicaid Services do not reimburse hospitals for additional costs associated with patient falls.

What are the types of patient falls?

1. Anticipated/ predictable Physiological Falls: 78%
   - ❑Typically result from known risk factors (medication, mobility issues, previous falls)
2. Unanticipated/ unpredictable Physiological Falls: 8%
   - ❑Falls due to unpredictable physiological causes – seizure, fainting, drug reaction
3. Accidental Falls: 14%
   - ❑Low-risk patient (or non-patient); caused by environment

Why worry about falls – Financial

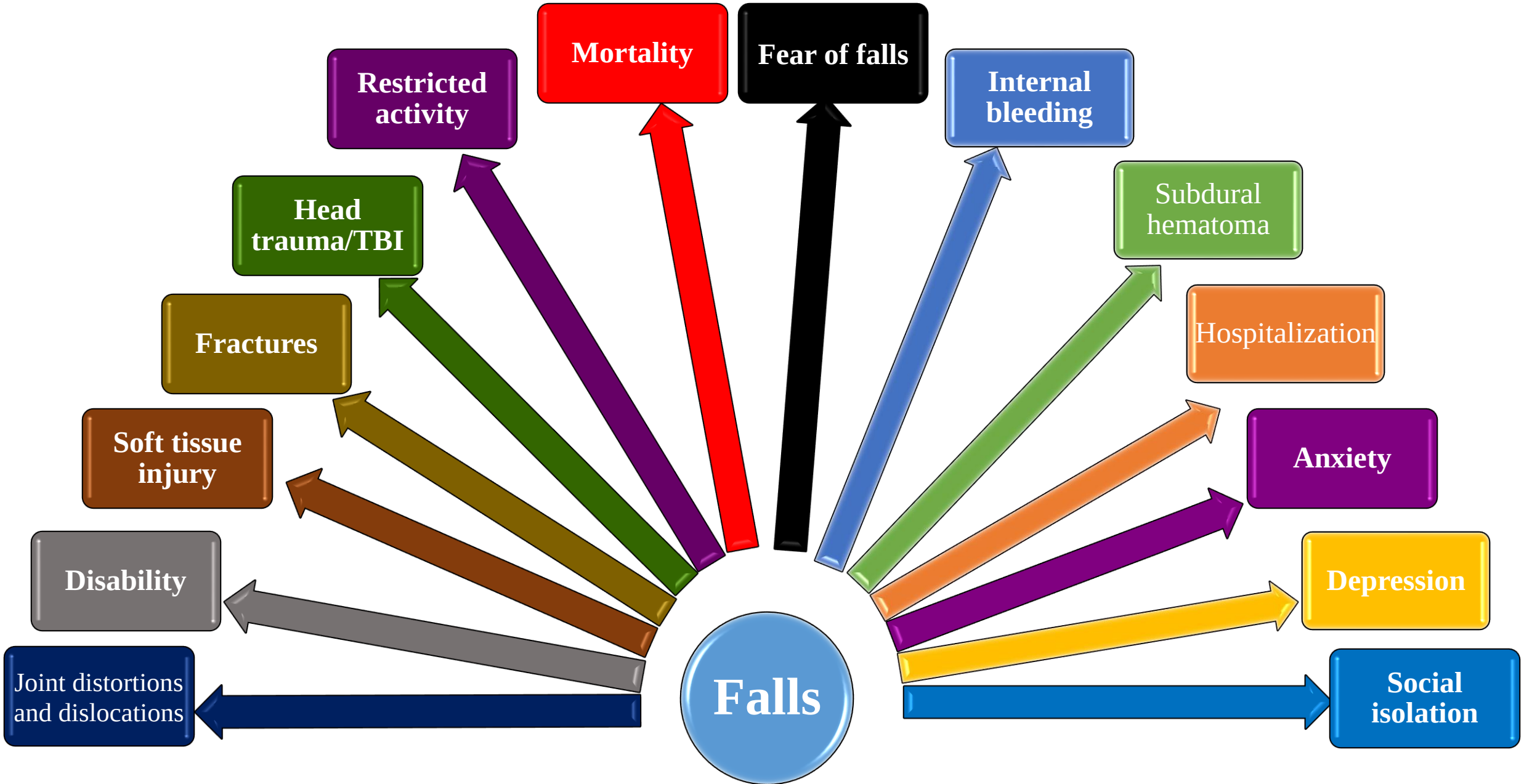
- AHRQ (The Agency for Healthcare Research and Quality's)
  - Operational costs for fallers with serious injury found to be approximately $10,000 higher than non-fallers.
  - Falls involving injury can increase patient-care costs as much as 61%.
- ECRI (Emergency Care Research Institute)
  - High frequency of claims; cost averaging $48,000

Why worry about falls – Financial

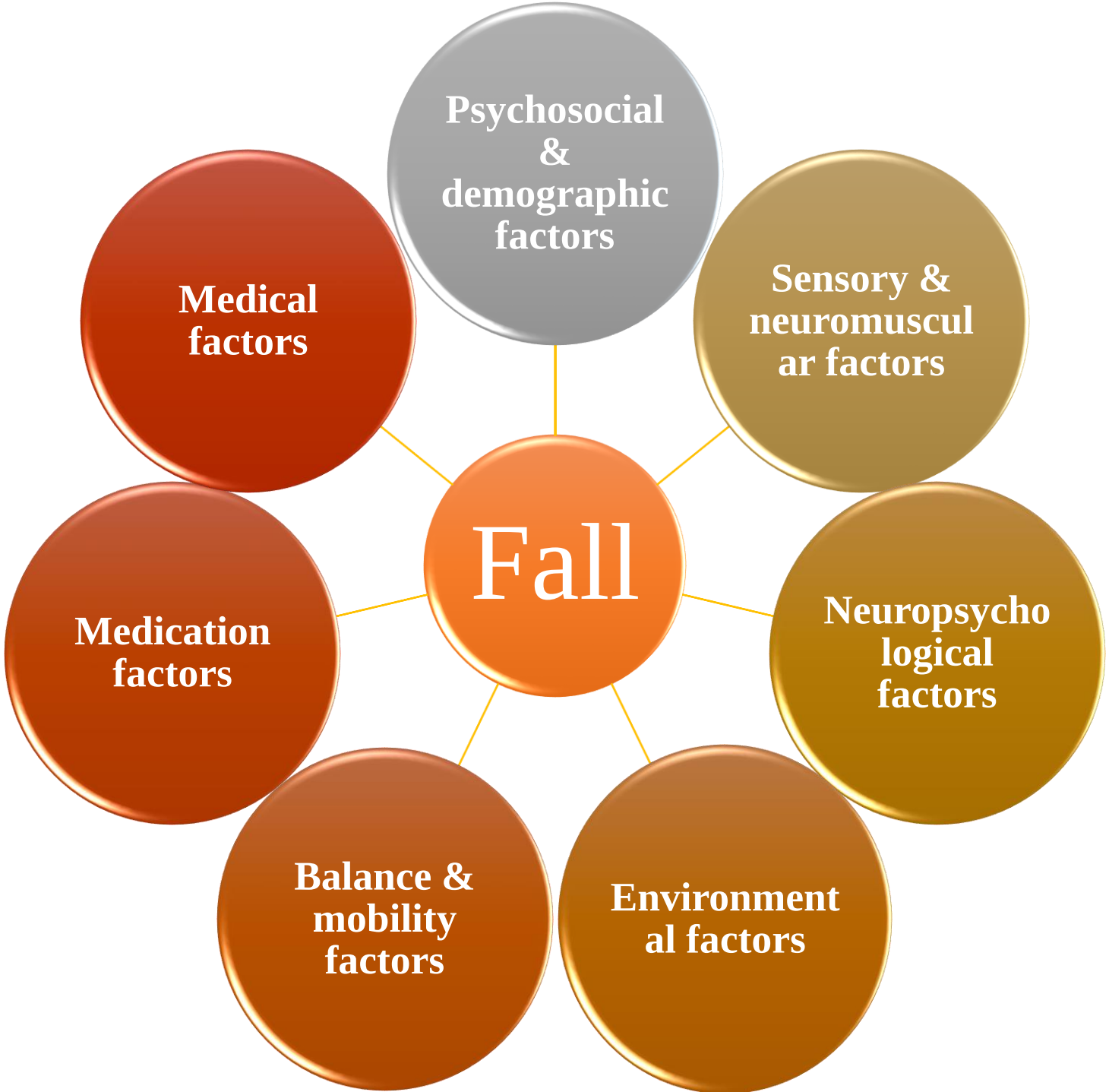
- Falls among adults age 65 and older are very costly. Each year about $50 billion is spent on medical costs related to non-fatal fall injuries and $754 million is spent related to fatal falls.

- Non-fatal falls
  - $29 billion is paid by Medicare
  - $12 billion is paid by private or out-of-pocket payers
  - $9 billion is paid by Medicaid

Why worry about falls – Outcome




FALLS
RISK


Psychosocial & demographic factors
Sensory & neuromuscular factors
Neuropsychological factors
Environmental factors
Balance & mobility factors
Medication factors
Medical factors
Fall


FALLS
RISK

Psychosocial & demographic factors

3+

- **Advanced age >70**
- **History of falls**
- **ADL limitations**

2+

- Female gender
- Living alone
- Inactivity

-

- Alcohol consumption

Medical factors

3+	2+	1+
• Stroke • Parkinson disease	• Incontinence • Acute illness	• Vestibular disorders • Orthostatic hypotension

Medication factors

- Psychoactive medication use
- Use of 4+ medications

3+

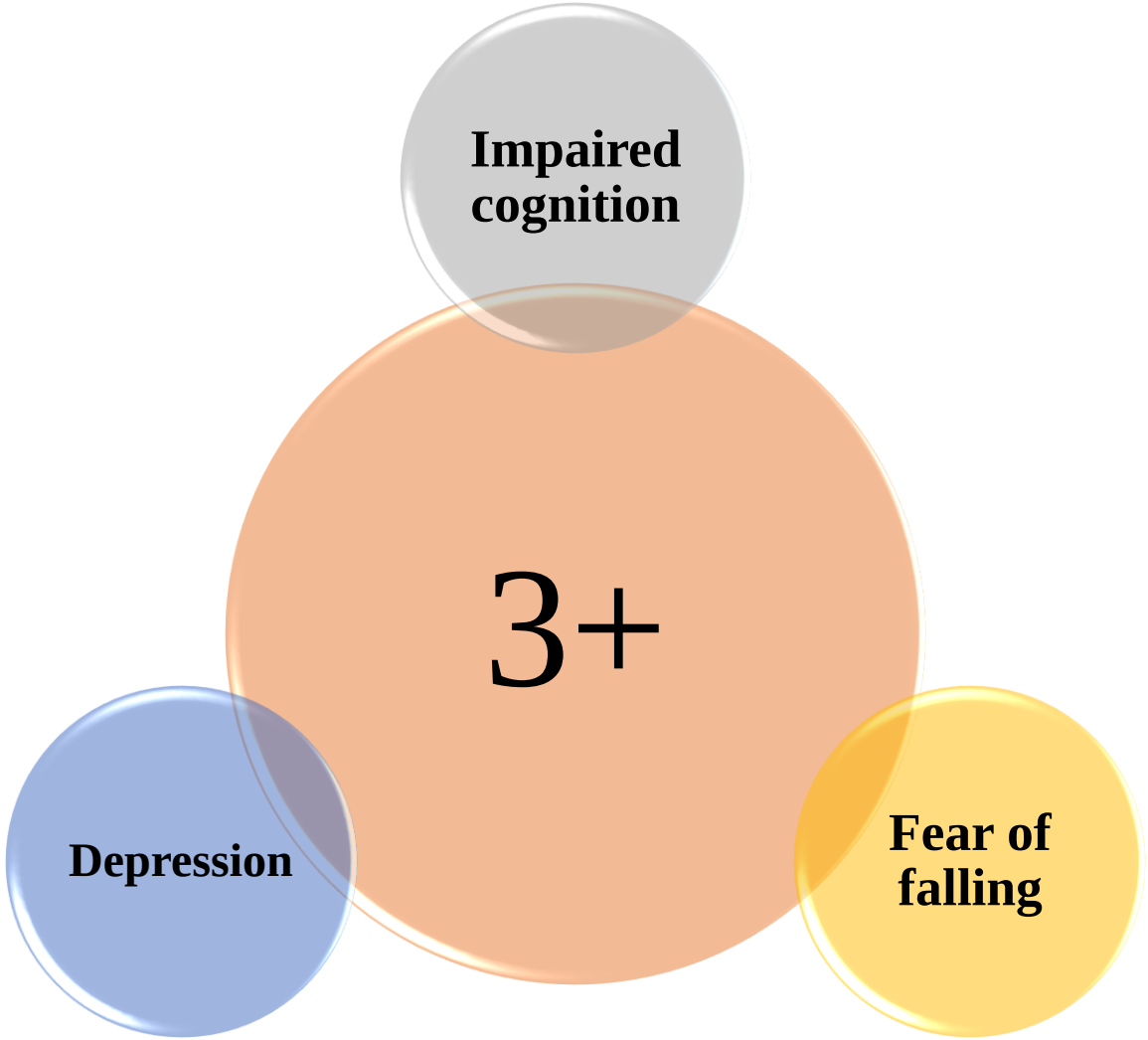
- Antihypertensive use

1+

- NSAIDs

-

Neuropsychological factors



Balance and mobility factors

3+

- Impaired stability when leaning and reaching

2+

- Impaired gait and mobility
- Impaired ability in standing up

1+

- Inadequate responses to external

Sensory and neuromuscular factors

3+	2+	1+
Muscle weakness	Visual acuity	Reduced vestibular function
Visual contrast sensitivity	Visual field loss	
Reduced peripheral sensation		

Environmental factors

1+	• Poor footwear • Inappropriate spectacles
-	• Home hazards • External hazards

FALL RISK SCREENING AND ASSESSMENT

Community

- The Timed Up and Go Test (TUG) measures
- A time of 12 or more seconds to complete the tests indicates impaired functioning

Emergency department

- Fall in the past 12 mo
- Use of 6+ medications

Hospital

- The St. Thomas risk assessment tool (STRATIFY)
- A positive score on ≥ 2 of the 5 items indicates an increased risk of falls.

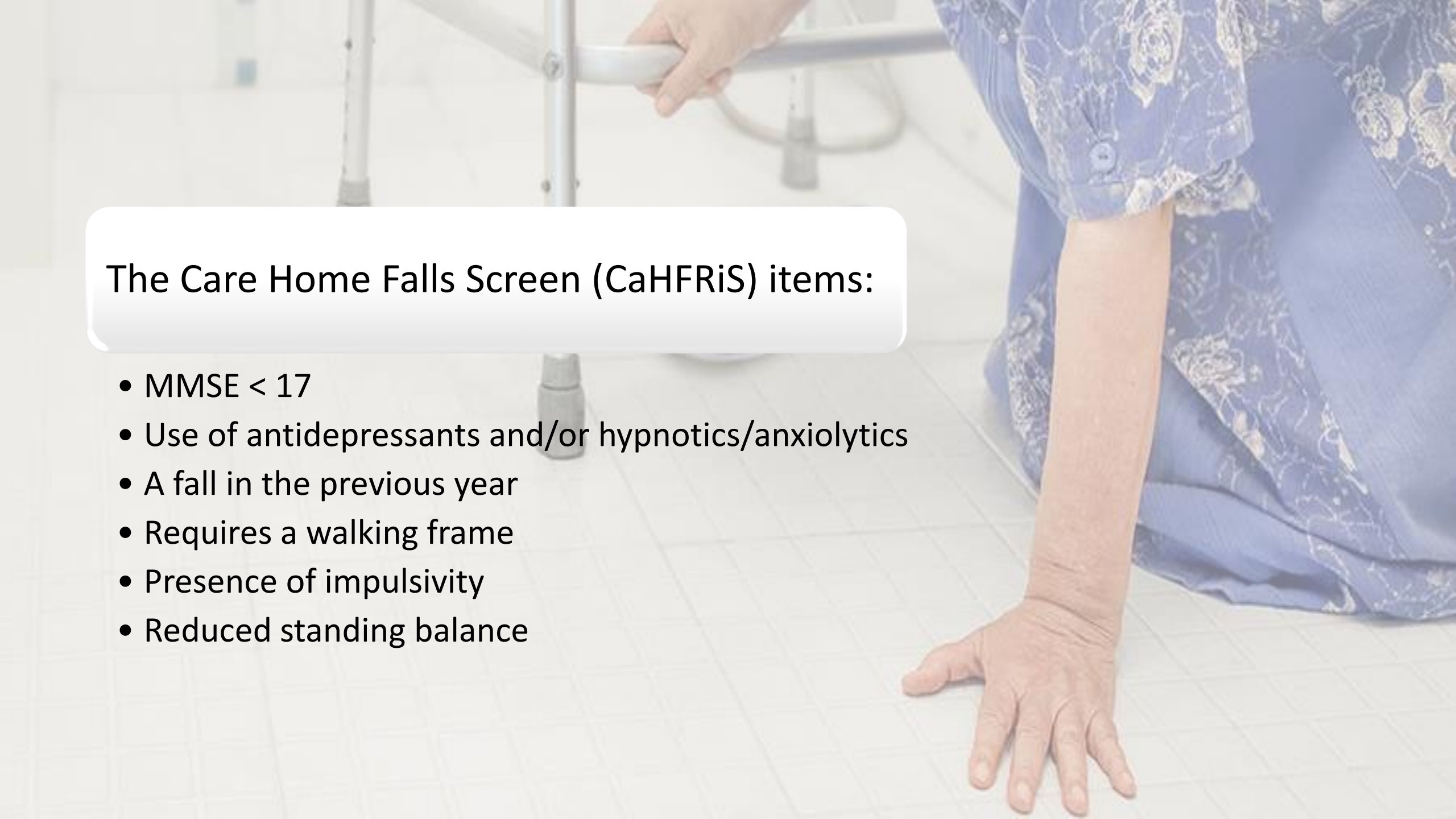
Residential aged care facilities

- The CaHFRiS
- Provides a simple way of quantifying the probability with which a care home resident will fall over a 6-mo period.

The St. Thomas risk assessment tool (STRATIFY)

		Date
• Did the patient present to the hospital with a fall or have they fallen on the ward since admission? (Yes = 1, No = 0)		
Do you think the patient is:-		
2. Agitated / confused (Yes = 1, No = 0)		
3.Visually impaired to the extent that everyday function is impaired? (Yes = 1, No = 0)		
4. In need of especially frequent toileting? (Yes = 1, No = 0)		
5. Needs physical assistance with transfers & / or mobility? (Yes = 1, No = 0)		
TOTAL SCORE		
To be completed & signed by registered nurse		

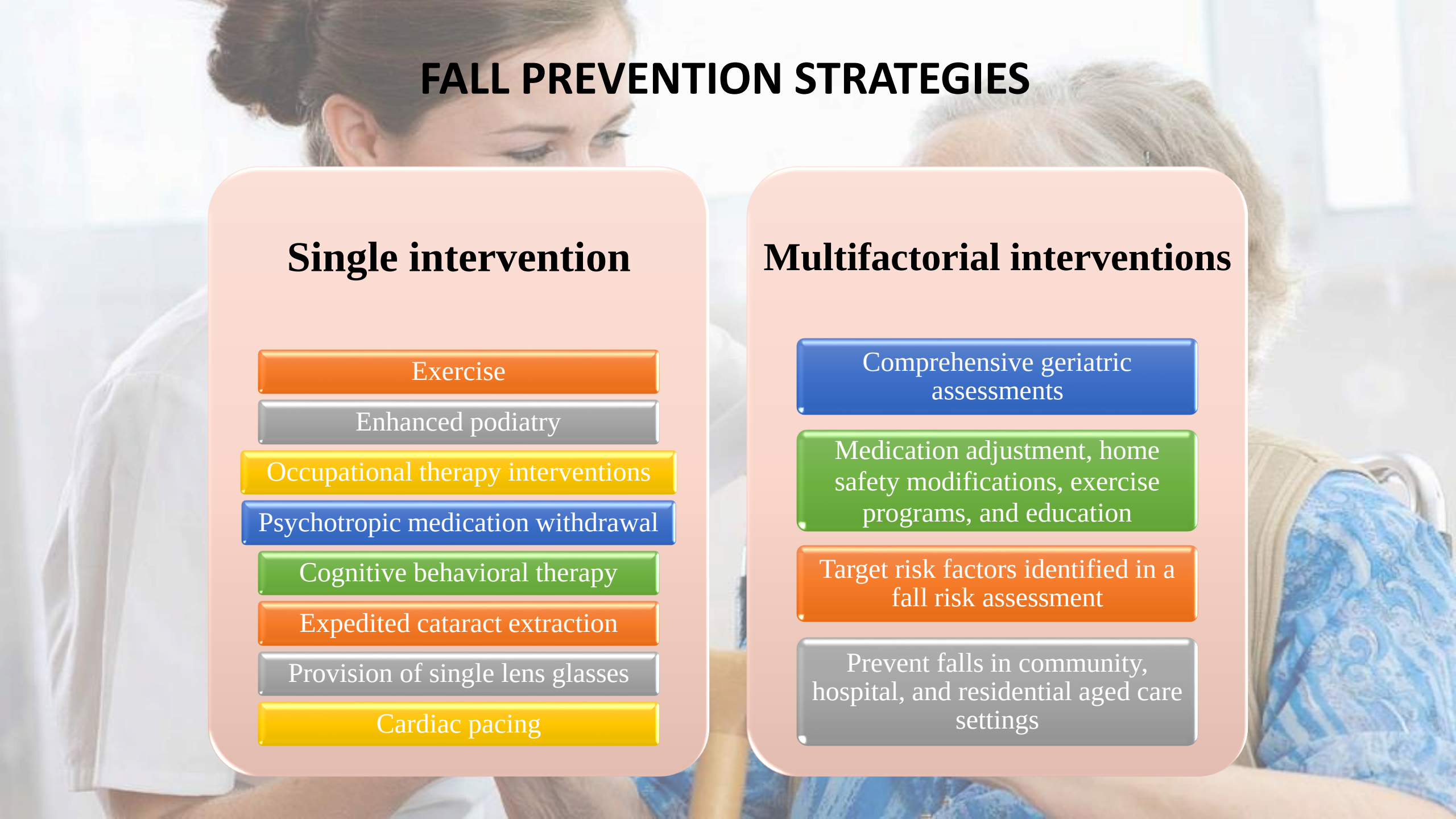
Patient to be assessed on admission
Re-assess overleaf:
- Weekly
- After a fall
- If a change in the patient's condition alters the likelihood of them falling



The Care Home Falls Screen (CaHFRiS) items:

- MMSE < 17
- Use of antidepressants and/or hypnotics/anxiolytics
- A fall in the previous year
- Requires a walking frame
- Presence of impulsivity
- Reduced standing balance


Prevent a Fall



FALL PREVENTION STRATEGIES

Single intervention

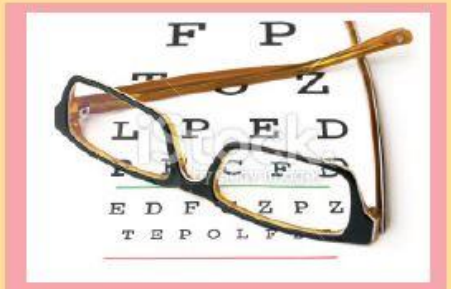
- Exercise
- Enhanced podiatry
- Occupational therapy interventions
- Psychotropic medication withdrawal
- Cognitive behavioral therapy
- Expedited cataract extraction
- Provision of single lens glasses
- Cardiac pacing

Multifactorial interventions

- Comprehensive geriatric assessments
- Medication adjustment, home safety modifications, exercise programs, and education
- Target risk factors identified in a fall risk assessment
- Prevent falls in community, hospital, and residential aged care settings

4 Fall Prevention Tips for Seniors

1 Have Your Medications Reviewed



2 Have Your Eyes Checked

3 Make Your Home Safe

4 Stay Active and Exercise


PREVENTING
FALLS
A home visit
can reduce the rate of injury from falls by
39%
Exercise-based programmes reduce
37%
of all injurious falls
and
61%
of falls leading to fractures
Falls reduction programmes need more than
50
hours
of
exercise

STEADI Interventions

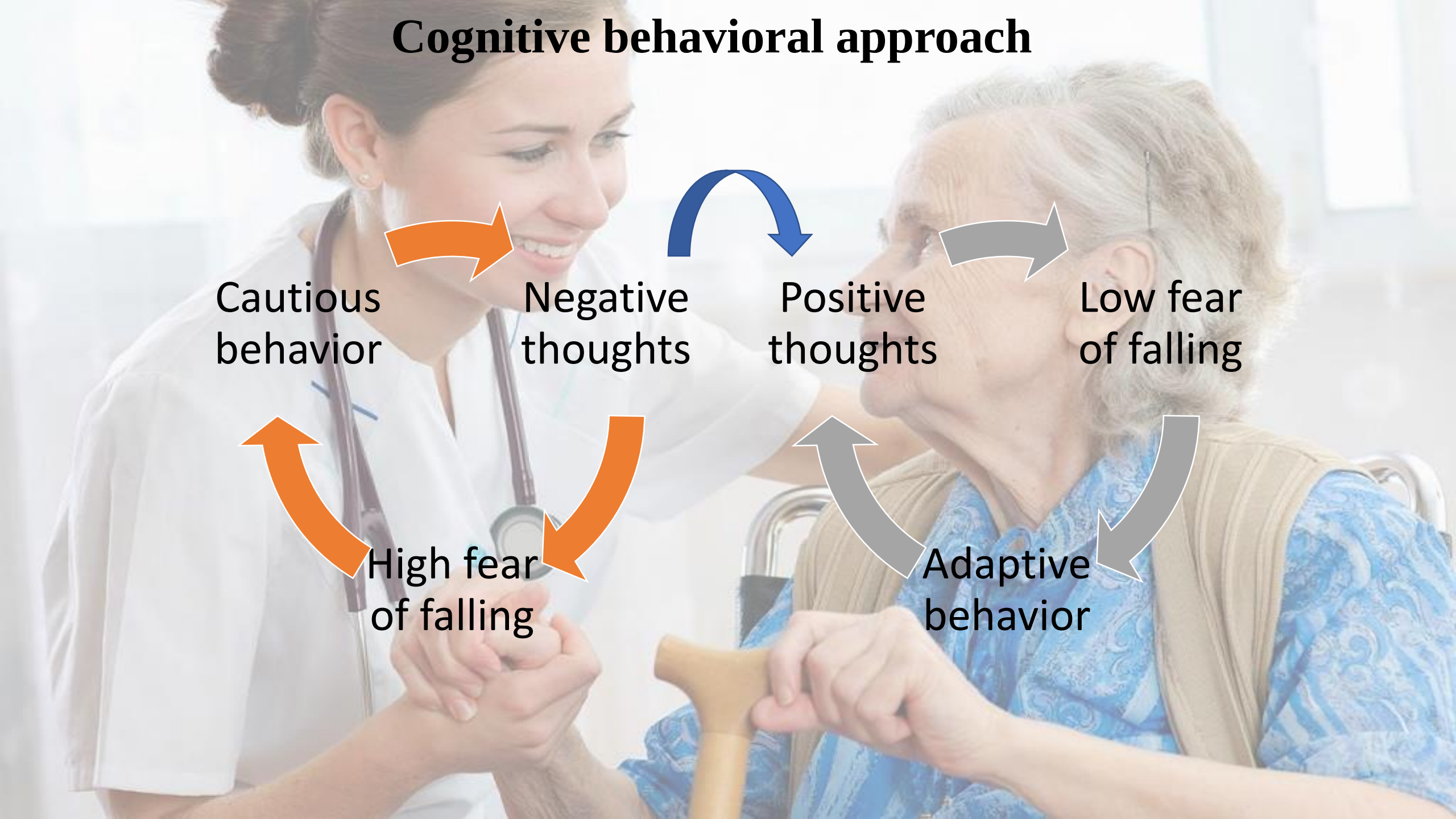
- STEADI (Stopping Elderly Accidents, Deaths & Injuries)
- Screen patients 65+
- ASK
  - ✓Have you fallen in the past year?
  - ✓Do you feel unsteady when standing or walking?
  - ✓Do you worry about falling?
- Review
  - ✓Medications and stop, switch or reduce the dosage of drugs that increase fall risk
- Recommend
  - ✓Vitamin D supplements of at least 800 IU/day with calcium

STEADI

- If 5,000 health care providers adopted STEADI, as many as:
  - 6.3 million more patients could be screened
  - 1.3 million more falls could be prevented
  - $3.6 billion more in direct medical costs could be saved

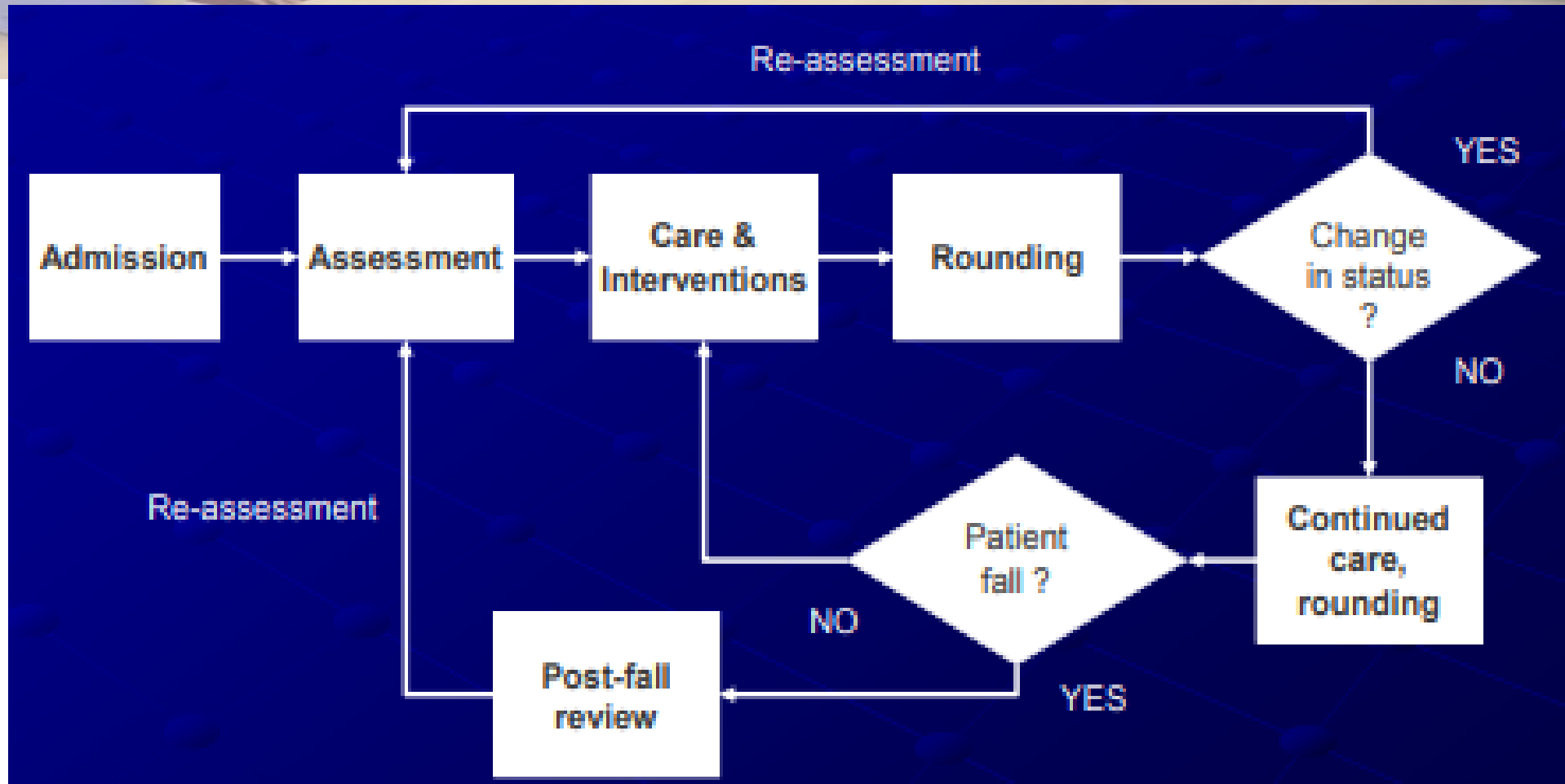
Understanding fear of falling

Cognitive behavioral approach



Steps of In-Hospital Fall Prevention Process

- Patient Assessment
- Care & interventions
- Rounding
- Re-assessment
- Post-fall review



Universal Fall Precautions: Rounding

- Pain
  - Assessment
  - Medication
- Personal Needs/Potty
  - Toileting Assistance (Half of falls elimination-related)
  - Food/ Water
- Position
  - Place bed in low position
  - Position patient so comfortable
  - Ensure bed/ wheelchair locked
- Placement/Possession
  - Call button in reach
  - Other needs: telephone, TV remote, water, tissues, garbage, table
- Prevention
  - Wear nonslip footwear
  - Use of night lights
  - Use of handrails
  - Keep floors clean, uncluttered (wet floor/ environmental obstacles contributed to 8% of fall)

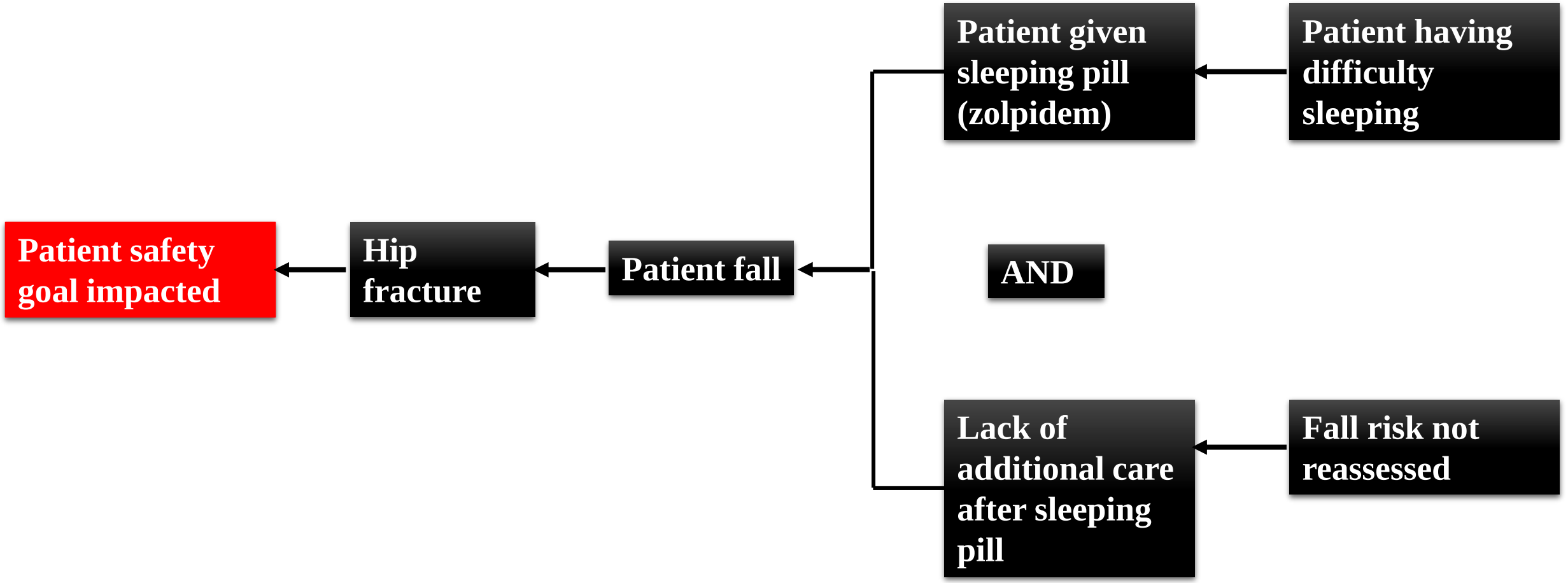
Case Study: Patient Fall – Medication Change

- Step 1. Outline
- What Problem(s): Patient fall, injury
- When:
  - Time: Evening
  - Different, unusual, unique: Patient given sleeping pill zolpidem
- Where
  - Facility, site: Medical Center
  - Task being performed: Helping patient sleep
- Impact to the Goals

Patient Safety	**Hip fracture**
Patient Services	Lack of additional care after sleeping pill
Schedule/ Operations	Additional two weeks in hospital
Outecome	Death

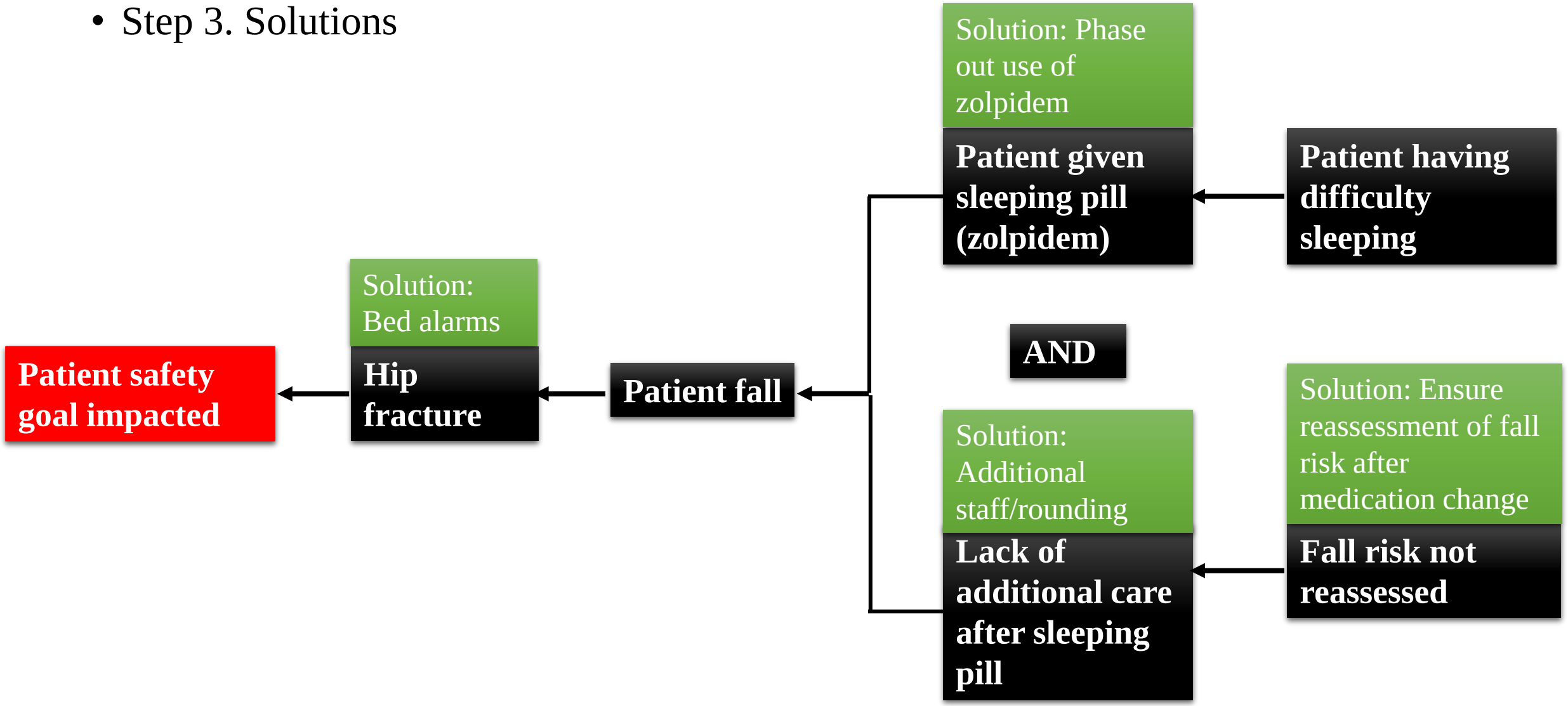
Patient Fall – Medication Change

- Step 2. Cause Map



Patient Fall – Medication Change

- Step 3. Solutions



Important Facts about Falls

- Falls are the second leading cause of unintentional injury deaths worldwide.
- Each year an estimated 684 000 individuals die from falls globally of which over 80% are in low- and middle-income countries.
- Adults older than 60 years of age suffer the greatest number of fatal falls.
- 37.3 million falls that are severe enough to require medical attention occur each year.
- Prevention strategies should emphasize education, training, creating safer environments, prioritizing fall-related research and establishing effective policies to reduce risk.

Healthcare Providers

STEP 1:

Screen all patients age 65+ for fall risk.

STEP 2:

Assess a patient's modifiable risk factors and fall history.

STEP 3:

Intervene to reduce identified risk using effective strategies.

Less than half of older adults who fall talk to their doctor about it. Providers can proactively ask about falls.

Thanks for attention