Using the ASCP-NCOA Falls Risk Reduction Toolkit Part 1: A Companion to CDC's STEADI Toolkit
Target Audience: Pharmacists
ACPE#: 0202-9999-18-056-L01-P
Activity Type: Application-based
Disclosures

Kathleen A. Cameron, BS Pharm, MPH - None
Michelle Fritsch, PharmD, BCGP, BCACP – None

The American Pharmacists Association is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.
Learning Objectives

2. Identify common risk factors for falls in the senior population.
3. Utilizing patient cases, develop individualized recommendations for fall prevention based on a medication review.
1. Assessment Question

When performing a comprehensive falls risk assessment, which of the following would not be performed by a pharmacist?

A. Obtaining a medical history
B. Referring to a physical therapist
C. Performing a home safety assessment
D. Communicating medication adjustments to a prescriber
2. Assessment Question

Which of the following is **not** a risk factor for falls?

A. Living alone  
B. Depression  
C. 2-3 chronic medications  
D. Frailty
3. Assessment Question

Which of the following antidepressants is most associated with falls and increased fragility?

A. Duloxetine
B. Paroxetine
C. Selegiline
D. Bupropion
The safest example of appropriate opiate prescribing to reduce falls would be which of the following?

A. Use of a short-acting opiate at a dose greater than 50 morphine milligram equivalents per day
B. Use of long-acting opiates for greater than 7 days
C. Preferentially using long-acting opiates after a joint replacement surgery
D. Alternating opiate with non-opiate analgesics for up to 3 days for acute pain.
Agenda

Part 1
- Review of general falls risk factors
- Exploration of falls-risk associated medical conditions and medications
- Overview of CDC STEADI Toolkit
- Introduction to components of the ASCP-NCOA Falls Risk Reduction Toolkit
- Case Study Work–Pharmacologic and Medical Issues

Part 2
- Strength, Balance, and Gait Assessments
- Interprofessional Fall and Fall Risk Management: Introduction to the Role of Physical and Occupational Therapy
- National and State Initiatives
- Case Work and Discussion
- Incorporating Falls Prevention Into Practice
- Wrap-Up
Acronyms/abbreviations used in this presentation

BDZ  Benzodiazepine
BUN  Blood urea nitrogen
CNS  Central nervous system
CVA  Cerebrovascular accident
CVD  Cardiovascular disease
ESRD End-stage renal disease
FRID  Fall risk increasing drug
MAI  Medication appropriateness index
MS  Multiple sclerosis
MVA  Motor vehicle accident

NSAID Nonsteroidal anti-inflammatory drug
SCr  Serum creatinine
SSRI  Selective serotonin reuptake inhibitor
START  Screening tool to alert doctors to right treatment
STOPP  Screening tool of older person’s prescriptions
TCA  Tricyclic antidepressant
UI  Urinary incontinence
UTI  Urinary tract infection
What We Know About Falls and Fall-Related Injuries and Deaths

- Common
- Costly
- Impactful
- Predictable
- Largely Preventable

Everyone has a role to play and can make a difference within their own sphere of influence.
It Takes A Village

“It takes a village of stakeholders working together to prevent falls and reduce falls risk, tasks that no one stakeholder can accomplish alone”

Falls General Risk Factors

- Advanced age
- Frailty
- Para-transitions
- Lives alone/minimal support system
-Ambulation status
- Sensory deficits

#1 Factor
History of a Fall

Patient feels unsteady
Patient worries about falling
CDC STEADI

- Toolkit for professionals
- Toolkit for patients

https://www.cdc.gov/steadi/index.html
STEADI Professional Components

Fall Risk Checklist

Patient: ___________________________ Date: __________ Time: __________ AM/PM

<table>
<thead>
<tr>
<th>Fall Risk Factor Identified</th>
<th>Factor Present?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls History</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Any falls in past year?</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Worries about falling or feels unsteady when standing or walking?</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Medical Conditions</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Problems with heart rate and/or rhythm</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Incontinence</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Foot problems</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Other medical conditions</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Medications (Prescriptions, OTCs, supplements)</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>CNS or psychotropic medications</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Medications that cause sedation or confusion</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
<tr>
<td>Medications that cause hypertension</td>
<td>□ Yes □ No</td>
<td></td>
</tr>
</tbody>
</table>

Gait, Strength & Balance

Timed Up and Go (TUg) Test
2012 seconds: □ Yes □ No

30-Second Chair Stand Test
Below average score based on age and gender: □ Yes □ No

4-Stage Balance Test
Full tandem stance <10 seconds: □ Yes □ No

Vision
Acuity <20/40 or no eye exam in 1 year: □ Yes □ No

Postural Hypertension
A decrease in systolic BP 20 mm Hg or a diastolic BP of 10 mm Hg or lightheadedness or dizziness from lying to standing: □ Yes □ No

Other Risk Factors (Specify): □ Yes □ No

Screen for falls and/or fall risk
Patient answers YES to any key question:
• Fall in past year? If YES, ask:
  - How many times and when?
  - Were you injured?
  - Falls unprovoked when standing or walking?
  - Worried about falling?

YES to any key question:

Evaluate gait, strength & balance
• Timed Up & Go (recommended)
• 30 Second Chair Stand (optional)
• 4 Stage Balance Test (optional)

Get, strength or balance problem
• Slow up, modified medications
• Falls history
• Other medical conditions

LOW RISK - Individualized fall interventions
• Educate patient
• Ensure 25%+ calcium
• Refer for strength & balance exercise (community exercise or fall prevention program)

MODERATE RISK - Individualized fall interventions
• Educate patient
• Review & modify medications
• Ensure 25%+ calcium
• Refer to PT to improve gait, strength & balance
• Refer to community fall prevention program

HIGH RISK - Individualized fall interventions
• Educate patient
• Ensure 25%+ calcium
• Refer to PT to enhance functional mobility & improve strength & balance
• Manage & monitor hypertension
• Modify medications
• Address foot problems
• Optimize vision
• Optimize home safety

Follow-up with HIGH RISK patient within 30 days
• Review care plan
• Assess & encourage fall risk education behaviors
• Discuss & address barriers to adherence

Transition to maintenance exercise program when patient is ready

For these patients, consider additional risk assessment (e.g., medication review, cognitive screen, ophthalmology)

https://www.cdc.gov/steadi/index.html
STEADI Patient Components

https://www.cdc.gov/steadi/index.html
ASCP/NCOA Toolkit Components

- Falls Risk Checklist
- Falls Application Cases
- Communications Documents
- Build Your Referral Network
- Bibliography

Support provided by Sanofi
Medical Conditions Associated with Falls
Medical Conditions

- Gait and Balance Altering
  - Parkinson’s Disease
  - Alzheimer’s Disease
  - Obesity
- Pain-Related Gait and Balance Changes
  - Lower extremity arthroplasty
  - Lower extremity injury
  - Lower extremity neuropathy
  - Osteoarthritis
  - Rheumatoid arthritis/other autoimmune arthritis
- Infections (eg, UTI)
- Organ Function

- Vascular-Related Conditions
  - Cardiovascular disease
    - Myocardial infarction
  - Arrhythmias (eg, atrial fibrillation)
  - Cerebrovascular disease
    - Cerebrovascular accident
    - Cerebellar ataxia
  - Hemophilia

- Central Nervous System
  - Depression
  - Epilepsy/Seizures
  - Multiple Sclerosis
- Incontinence
- Malnutrition, dehydration
# Gait & Balance Altering Conditions

## Associated Risk Factors
- Physical & neurological changes which impact gait or balance
- Muscle weakness
- Obesity
- Proprioception changes

## Parkinson’s Disease
- Manage on/off phenomena
- Orthostasis with Parkinson’s therapy
- Avoid anticholinergic therapy options (e.g. benztropine or trihexyphenidyl)

## Alzheimer’s Disease
- Falls increased with multi-tasking
- Cholinesterase inhibitors increase risk of syncope and falls
- Brain atrophy, declined frontal cognitive functions, and sleep
# Pain Related Gait & Balance Changes

- **Lower extremity arthroplasty**
  - High falls rate especially in days 1-3 post operative
  - Associated with bathroom use and more advanced age

- **Lower extremity injury**
  - Foot pain, physical changes, muscle weakness
  - Anything that alters gait or balance

- **Arthritis**
  - Osteoarthritis lower extremity – 2 to 5 times increased falls risk
  - Rheumatoid arthritis and other autoimmune arthritis
  - Risk further increased with inflamed lower extremity joints, fatigue, use of FRIDs
Vascular Related Conditions

**Cardiovascular Disease**
- Falls can be an atypical presenting symptom of acute MI
- Syncope due to disease and treatment
- Atrial fibrillation increased risk of falls and falls-related mortality

**Cerebrovascular Disease**
- Impaired balance post stroke
- Fall risk even if no gait impairment immediately post CVA
- Cerebellar dysfunction is associated with gait variability

**Hemophilia**
- Balance impairment can be linked to brain or muscle bleeds
- Mobility impairment, especially if there are joint changes due to bleeding in the joint
- Reduced physical activity due to fear of falling
- Incontinence (risk similar to all older adults)

Follow CVD treatment guidelines; do not undertreat those with fall risk due to increased CVD mortality.
<table>
<thead>
<tr>
<th>Central Nervous System Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depression</strong></td>
</tr>
<tr>
<td>- Depressed patients have a higher incidence of falls</td>
</tr>
<tr>
<td>- Depression is often not detected and diagnosed</td>
</tr>
<tr>
<td><strong>Epilepsy/Seizures</strong></td>
</tr>
<tr>
<td>- Any syncopal or ictal episode typically leads to a fall (esp. with loss of consciousness)</td>
</tr>
<tr>
<td>- Ictal bradyarrhythmias or arrhythmogenic epilepsy</td>
</tr>
<tr>
<td>- Post stroke seizures are associated with falls</td>
</tr>
<tr>
<td><strong>Multiple Sclerosis</strong></td>
</tr>
<tr>
<td>- &gt;60% annual fall rate</td>
</tr>
<tr>
<td>- Falls risk factors associated with MS are multi-factorial</td>
</tr>
<tr>
<td>Incontinence, Malnutrition &amp; Infection</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td><strong>Incontinence</strong></td>
</tr>
<tr>
<td>- UI treatment (anticholinergic) increase falls risk</td>
</tr>
<tr>
<td>- Urgency leads to hurry and falls</td>
</tr>
<tr>
<td>- UTI risk increased with UI</td>
</tr>
<tr>
<td><strong>Infection</strong></td>
</tr>
<tr>
<td>- Associated with confusion &amp; debilitation which increases falls risk</td>
</tr>
<tr>
<td>- UTI &amp; pneumonia common infections (all infections are a risk)</td>
</tr>
<tr>
<td><strong>Malnutrition</strong></td>
</tr>
<tr>
<td>- Muscle mass loss, weakness, debilitation, fatigue</td>
</tr>
<tr>
<td>- Nutrient deficiencies &gt;&gt;cognitive impairment, reduced concentration</td>
</tr>
<tr>
<td>- Associated arrhythmias</td>
</tr>
<tr>
<td>Renal &amp; Hepatic Impairment Associated</td>
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<td>--------------------------------------</td>
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</table>

### Renal Impairment
- Impact on medication dose
- Falls associated with ESRD and patients on hemodialysis
- Frailty likely underlying cause

### Hepatic Impairment
- Impact on medication dose
- Alcohol-related falls due to acute and chronic changes
- Associated with non-alcoholic fatty liver disease (again, frailty association)
- Falls associated with cirrhosis, hepatic encephalopathy
Falls Risk Inducing Drugs (FRIDs)
Falls Risk Inducing Drugs (FRIDs)

- CNS Depressants
  - Antidepressants
  - Benzodiazepines
  - Sedative/hypnotics
  - Neuroleptics
- Anticholinergics
  - Incontinence
  - Depression
  - Parkinson’s
  - Antispasmodics
- Pain Therapy
  - Opioids
  - Muscle relaxants
- Anticonvulsants
- Antihypertensives
- Hypoglycemic Agents
- Over-The-Counter
## CNS Depressants

### Antidepressants
- Tricyclic antidepressants have several side effects which increase falls risk
- Selective serotonin reuptake inhibitors are associated with increased fragility fracture risk as well as falls risk, especially paroxetine

### Benzodiazepines
- Long half-life / prolonged effect / accumulation
- Short half-life / quick onset also problematic
- Long vs. short acting BDZ = similar falls rate
- Taper slowly if discontinuing and monitor closely
### CNS Depressants (Continued)

**Sedative/Hypnotics**

- Zolpidem
- Zopiclone
- Zaleplon

- All associated with falls and driving impairment
- Impact balance, gait, and equilibrium

**Neuroleptics**

- First generation antipsychotics
- Atypical (2nd generation) psychotics
- Both associated with falls
<table>
<thead>
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<th>Anticholinergic Medications</th>
<th>Depression Medications</th>
<th>Parkinson Disease Therapies</th>
<th>Antispasmodics</th>
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<td>- TCA (esp. amitriptyline)</td>
<td>- Benztropine</td>
<td>- First generation antihistamines</td>
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<tr>
<td>- Oxybutynin and others</td>
<td>- SSRI's (esp. paroxetine)</td>
<td>- Trihexyphenidyl</td>
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</table>
## Pain Medications

### Opioids
- Risk higher with high potency
- Risk higher with use of long-acting without first using short-acting
- Risk higher with new prescription
- Impact balance, gait, and equilibrium

### Muscle Relaxants
- Associated with falls
- Little evidence of benefit
Anticonvulsants & Antihypertensives

**Anticonvulsants**
- Decreased bone density with chronic use
- Fall and fracture risks increase with longer use
- Both falls and MVA risk

**Antihypertensives**
- Diuretics/beta-blockers/alpha-blockers/vasodilators
- Data is mixed—Epidemiologic data links antihypertensives to falls
- Risk of falls higher in prior fallers
- Weigh risks and benefits; use lowest possible dose

Reminder – Dopaminergic agents can cause syncope
Hypoglycemics & OTC Agents

**Hypoglycemics**
- Falls associated with hypoglycemia
- Sulfonylureas
- Insulin

**OTC Agents**
- Sedative/anticholinergic & antihistamine agents
- Diphenhydramine
- Doxylamine and other sedating antihistamines
### Medication Overview & Lab Assessment

#### Medication Overview
- Number of medications (routine / as needed) > 4-6 (polypharmacy = falls risk)
- Number of doses per day & complex regimens associated w/ falls risk
- Recent medication changes

#### Lab Values
- Critically important labs
- Electrolytes, glucose, SCr, BUN, & hepatic enzymes
- Calculate estimated creatinine clearance (Cockcroft-Gault)
- Possibly medication concentrations
## Medication Assessment

### Medication Related Problems
- Each medication is necessary
- Safest evidence-based therapy
- Dose too low to be effective
- Dose too high causing adverse effects or unnecessary risk
- Interactions between medications, food, medical conditions
- Ability to effectively administer each medication
- Allergies and intolerances
- Indication without an associated therapy

### Geriatric Appropriate Medication
- Beer’s List
- STOPP
- START
- MAI
ASCP/NCOA Toolkit Components

- Falls Risk Checklist
- Falls Application Cases
- Communications Documents
- Build Your Referral Network
- Bibliography

Support provided by Sanofi
Falls Risk Checklist

Four key areas of the checklist

- Get to know your patient
- Medical conditions
- Medication assessment
- Fall Risk Inducing Drugs (FRIDs)

http://www.ascp.com/default.asp?page=fallstoolkit
<table>
<thead>
<tr>
<th>General Patient Factors</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>□ Age over 65</td>
<td>□ Age over 80</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Transition Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Pending transition</td>
<td>□ Recent transition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Living Arrangements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Lives alone</td>
<td>□ In home care, full-time</td>
</tr>
<tr>
<td>□ Lives with spouse or other</td>
<td>□ Assisted living facility</td>
</tr>
<tr>
<td>□ In home care, part-time</td>
<td>□ Skilled care facility</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Alcohol, ___ drinks per day</td>
<td>□ Marijuana</td>
</tr>
<tr>
<td>□ Other Illicit substances</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vital Signs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Postural hypotension:</strong></td>
<td><strong>Pulse:</strong></td>
</tr>
<tr>
<td>□ Systolic BP falls ≥ -20 mm Hg</td>
<td>□ Irregular</td>
</tr>
<tr>
<td>□ Diastolic BP falls ≥ -10 mm Hg</td>
<td>□ &lt; 50bpm</td>
</tr>
<tr>
<td>□ Dizzy or lightheaded with standing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ambulation Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Cane</td>
<td>□ Crutches</td>
</tr>
<tr>
<td>□ Front wheel walker</td>
<td>□ Rollator</td>
</tr>
</tbody>
</table>

Use appears correct: □ Yes □ No | Correction provided: ____________________________ |

Referral planned: ____________________________

<table>
<thead>
<tr>
<th>Sensory Function</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vision:</strong></td>
<td><strong>Hearing:</strong></td>
</tr>
<tr>
<td>□ Acuity &lt; 20/40</td>
<td>□ Hearing deficit</td>
</tr>
<tr>
<td>□ Blurred vision</td>
<td>□ Regular use hearing aid</td>
</tr>
<tr>
<td>□ No eye exam in last year</td>
<td>□ Sporadic use hearing aid</td>
</tr>
<tr>
<td>□ Corrected vision</td>
<td>□ Taste/smell:</td>
</tr>
<tr>
<td>□ Regular use of glasses/contacts</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sensory Function</th>
<th>Vision:</th>
<th>Hearing:</th>
<th>Feet/lower extremities:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acuity &lt; 20/40</td>
<td>Hearing deficit</td>
<td>Altered lower extremity sensation</td>
</tr>
<tr>
<td></td>
<td>Blurred vision</td>
<td>Regular use hearing aid</td>
<td>Foot pain</td>
</tr>
<tr>
<td></td>
<td>No eye exam in last year</td>
<td>Sporadic use hearing aid</td>
<td>Bunion</td>
</tr>
<tr>
<td></td>
<td>Corrected vision</td>
<td></td>
<td>Hammer toe</td>
</tr>
<tr>
<td></td>
<td>Regular use of glasses/contacts</td>
<td></td>
<td>Plantar fasciitis</td>
</tr>
<tr>
<td></td>
<td>Sporadic use glasses/contacts</td>
<td>Changes in taste</td>
<td>Heel spur</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes in smell</td>
<td>Ingrown toenail</td>
</tr>
<tr>
<td>Taste/smell:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medication Self Management</td>
<td></td>
<td>Falls History</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------</td>
<td>---------------</td>
<td>-------</td>
</tr>
<tr>
<td>□ Medications disorganized</td>
<td>□</td>
<td>□ Any falls in past year</td>
<td>□</td>
</tr>
<tr>
<td>□ Evidence of adherence issues</td>
<td></td>
<td>□ Number of falls in past year</td>
<td>□</td>
</tr>
</tbody>
</table>

If yes, explain: __________________________

Number of falls in past year ______ Injury? ______

Feels unsteady standing or walking
<table>
<thead>
<tr>
<th>Medical Conditions</th>
<th>Medical Conditions</th>
<th>Medical Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Arrhythmia (e.g. a fib)</td>
<td>☐ Arthritis (osteo, rheumatoid)</td>
<td>☐ Cardiovascular disease/MI</td>
</tr>
<tr>
<td>☐ Cerebellar ataxia</td>
<td>☐ CVA/Stroke</td>
<td>☐ Dementia</td>
</tr>
<tr>
<td>☐ Depression</td>
<td>☐ Hemophilia</td>
<td>☐ Impaired hepatic function</td>
</tr>
<tr>
<td>☐ Impaired renal function</td>
<td>☐ Incontinence</td>
<td>☐ Infection (e.g. UTI)</td>
</tr>
<tr>
<td>☐ Lower extremity arthroplasty</td>
<td>☐ Lower extremity (LE) injury/pain</td>
<td>☐ LE neuropathy - ☐ monofilament</td>
</tr>
<tr>
<td>☐ Malnutrition, dehydration</td>
<td>☐ Multiple sclerosis</td>
<td>☐ Obesity</td>
</tr>
<tr>
<td>☐ Pain</td>
<td>☐ Parkinson's disease</td>
<td>☐ Seizures</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Medications</th>
<th>Anticonvulsants</th>
<th>Antidepressants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticholinergics (e.g. oxybutinin, trihexiphenidyl, amitriptyline)</td>
<td>Antipsychotics/neuroleptics - typical or atypical</td>
<td>Benzodiazepines (short or long t 1/2)</td>
</tr>
<tr>
<td>Antihypertensives/CV meds (especially α-blockers, nitrates)</td>
<td>Hypoglycemia agents</td>
<td>Muscle relaxants</td>
</tr>
<tr>
<td>Dopaminergic agents</td>
<td>Sedative/hypnotics</td>
<td>Over-the-counter: diphenhydramine, doxylamine</td>
</tr>
<tr>
<td>Opioids</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Medication Assessment

| Number of medications (Rx, prn, OTC, vitamin, supplement, herbal) | ≥ 5 | ≥ 10 |
| Recent medication regimen change | within last week | within last month |

*Falls risk Medication-Related-PROblems detected:*

- **Suboptimal dose***
- **Dose too high**
- **Lacking medication therapy for all medication-requiring indications**
- **Allergies and intolerances within current regimen**
- **Unnecessary medication**
- **Safer evidence-based therapy available**
- **Difficulty administering any medication (eye drops, inhalers, large dosage forms)**

* suboptimal dose - check doses based on renal and hepatic function

** dose too high - causing adverse effects and/or unnecessary risk

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http://www.ascp.com/default.asp?page=fallstoolkit
Tally the Risks
Considerations

- Number per class/risk type
  - \( \leq 2 \) CNS depressing medications
- Limit anticholinergic burden
- Medical conditions, medications, other factors
- Patient specific
- Pharmacists are uniquely suited for this in-depth analysis
- Consider all risks and benefits

Alternatives

- Newer generation options with fewer side effects
- Avoid benzodiazepines and “Z drugs”
- Avoid tricyclic antidepressants, paroxetine
- Topical in place of systemic
- Acetaminophen in place of skeletal muscle relaxants, NSAIDs, or opioids whenever possible
- Short-acting over long-acting options (e.g. hypoglycemics, opiates)
- Lowest possible dose to achieve therapeutic goal
- Use nonpharmacologic approaches whenever possible

Patient & family

Documentation & Communication
Falls Bibliography Resource

Cases
1. Assessment Question

When performing a comprehensive falls risk assessment, which of the following would not be performed by a pharmacist?

A. Obtaining a medical history
B. Referring to a physical therapist
C. Performing a home safety assessment
D. Communicating medication adjustments to a prescriber
2. Assessment Question

Which of the following is **not** a risk factor for falls?

A. Living alone
B. Depression
C. 2-3 chronic medications
D. Frailty
3. Assessment Question

Which of the following antidepressants is most associated with falls and increased fragility?

A. Duloxetine  
B. Paroxetine  
C. Selegiline  
D. Bupropion
4. Assessment Question

The safest example of appropriate opiate prescribing to reduce falls would be which of the following?

A. Use of a short-acting opiate at a dose greater than 50 morphine milligram equivalents per day
B. Use of long-acting opiates for greater than 7 days
C. Preferentially using long-acting opiates after a joint replacement surgery
D. Alternating opiate with non-opiate analgesics for up to 3 days for acute pain.