

CATCH RURAL Falls

***Coordinated Action Toward
Community Health: RedUce
Risk And Limit Falls***

**Balancing Act: Managing
Medications to Prevent Falls**

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Educational Objectives



Identify common medications associated with increased fall risk in older adults and describe their mechanism contributing to falls.



Assess and reduce medication-related fall risk with various strategies and education.



Stopping Elderly Accidents, Deaths, and Injuries (STEADI) Algorithm

STEADI Algorithm for Fall Risk Screening, Assessment, and Intervention among Community-Dwelling Adults 65 years and older

START HERE

1 SCREEN for fall risk yearly, or any time patient presents with an acute fall.

Available Fall Risk Screening Tools:

• **Stay Independent: a 12-question tool** [at risk if score ≥ 4]
 - **Important:** If score < 4 , ask if patient fell in the past year (If **YES** → patient is at risk)

• **Three key questions** for patients [at risk if **YES** to any question]
 - Feels unsteady when standing or walking?
 - Worries about falling?
 - Has fallen in past year?
 » If **YES** ask, "How many times?" "Were you injured?"

SCREENED NOT AT RISK

PREVENT future risk by recommending effective prevention strategies.

- Educate patient on fall prevention
- Assess vitamin D intake
 - If deficient, recommend daily vitamin D supplement
- Refer to community exercise or fall prevention program
- Reassess yearly, or any time patient presents with an acute fall

SCREENED AT RISK

2 ASSESS patient's modifiable risk factors and fall history.

Common ways to assess fall risk factors are listed below:

Evaluate gait, strength, & balance
 Common assessments:
 • Timed Up & Go • 4-Stage Balance Test
 • 30-Second Chair Stand

Identify medications that increase fall risk (e.g., Beers Criteria)

Ask about potential home hazards (e.g., throw rugs, slippery tub floor)

Measure orthostatic blood pressure (Lying and standing positions)

Check visual acuity
 Common assessment tool:
 • Snellen eye test

Assess feet/footwear

Assess vitamin D Intake

Identify comorbidities (e.g., depression, osteoporosis)

3 INTERVENE to reduce identified risk factors using effective strategies.

Reduce identified fall risk

- Discuss patient and provider health goals
 - Develop an individualized patient care plan (see below)
- Below are common interventions used to reduce fall risk:

Poor gait, strength, & balance observed

- Refer for physical therapy
- Refer to evidence-based exercise or fall prevention program (e.g., Tai Chi)

Medication(s) likely to increase fall risk

- Optimize medications by stopping, switching, or reducing dosage of medications that increase fall risk

Home hazards likely

- Refer to occupational therapist to evaluate home safety

Orthostatic hypotension observed

- Stop, switch, or reduce the dose of medications that increase fall risk
- Educate about importance of exercises (e.g., foot pumps)
- Establish appropriate blood pressure goal
- Encourage adequate hydration
- Consider compression stockings

Visual impairment observed

- Refer to ophthalmologist/optometrist
- Stop, switch, or reduce the dose of medication affecting vision (e.g., anticholinergics)
- Consider benefits of cataract surgery
- Provide education on depth perception and single vs. multifocal lenses

Feet/footwear issues identified

- Provide education on shoe fit, traction, insoles, and heel height
- Refer to podiatrist

Vitamin D deficiency observed or likely

- Recommend daily vitamin D supplement

Comorbidities documented

- Optimize treatment of conditions identified
- Be mindful of medications that increase fall risk

FOLLOW UP with patient in 30-90 days.

Discuss ways to improve patient receptiveness to the care plan and address barrier(s)



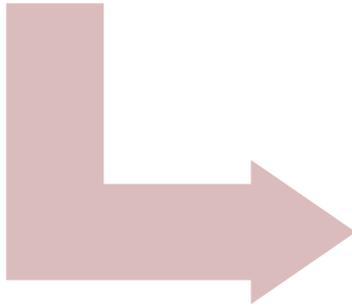
Centers for Disease Control and Prevention
 National Center for Injury Prevention and Control

Medications & Falls

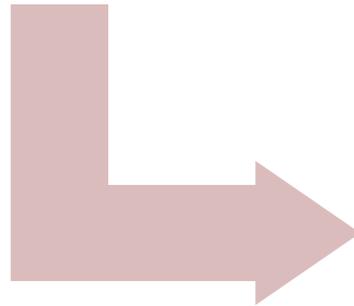
- Between 1997-2017 the percentage of older adults receiving at least one FRID (fall risk increasing drug) rose from 57% to 94%
- Among older adults hospitalized for fall related injury, 65% to 93% were taking at least one FRID at the time of the fall
- Taking 4 or more medications is associated with increased risk of falls



Comprehensive
medication history



Assess
medication list for
medications that
increase risk of
falls



Implement
changes to
medications to
reduce falls risk



Comprehensive Medication History Tips

Ask the patient or caregiver to bring in all medications

Utilize the prescription drug monitoring program if available to collect data

Ask about over the counter medications and supplements

Verify dosing and frequency

- Including as needed medications

Medication management method

STOPP Fall Tool (Screening Tool of Older Persons' Prescriptions in older adults with high fall risk)

Medication Class	Commonly used meds	Consider withdrawal if the following occur	Tapering needed?	Monitoring after prescribing
Benzodiazepines and benzodiazepine related drugs	clonazepam, alprazolam, lorazepam, zolpidem, zaleplon, eszopiclone	Daytime sedation, cognitive impairment, psychomotor impairment	Yes, typically an extended taper	Monitor: anxiety, agitation, insomnia

Beers Criteria American Geriatrics Society

Drug	Concern	Alternatives
<u>Benzodiazepine receptor agonists:</u> eszopiclone, zolpidem, zaleplon	<ul style="list-style-type: none"> Adverse effects similar to BZD (delirium, falls, fractures) Increased ER visits and hospitalization Minimal improvement in sleep latency and duration Avoid 	Sleep hygiene Melatonin: sleep onset Low-dose mirtazapine (weight gain) Low-dose trazodone (orthostasis)

Medication Classes Associated with Falls

Antipsychotics

- EPS, sedation, dizziness, blurred vision

Opioids

- Psychomotor Impairment, impaired balance, sedation

Antidepressants

- Hyponatremia, orthostasis, sedations, dizziness

Antiepileptics

- Ataxia, sedations, impaired balance, dizziness

Alpha blockers

- Orthostatic hypotension

Centrally acting antihypertensives

- Orthostatic hypotension, sedation

First generation antihistamines

- sedation

Overactive bladder/ Incontinence medications

- Confusion, blurred vision, drowsiness, dizziness

Muscle relaxants

- Sedation, confusion



Orthostatic hypotension- Meds!

Antihypertensives (clonidine, nitrates, hydralazine, minoxidil)
Antipsychotics (Quetiapine, Olanzapine, Risperidone)
Levodopa/ Carbidopa
Dopamine agonists (Ropinirole, Pramipexole)
Tricyclic antidepressants
Opioids
PDE 5 Inhibitors-Sildenafil, Tadalafil
Marijuana



Medication Assessment

Diabetes

- Sulfonylureas- hypoglycemia
- Thiazolidinediones (pioglitazone)- fracture risk
- Metformin- lactic acidosis risk
- Insulin- hypoglycemia, dexterity, cognitive impairment

Sarcopenia

- Androgen deprivation therapies
- Chemotherapy
- GLP 1 Agonists/ GIPs
- Glucocorticoids

OTCs & Supplements

OTC Sleep Aids (Tylenol PM[®], Zzquil[®])

- Sedation, multiple products

Marketing

Proprietary Blends

Valerian, Kava kava, Chamomile

- Sedating

Garlic, Hawthorne, Ginseng, Niacin

- Vasodilation, hypotension

Gingkgo, garlic, high dose fish oil

- Antiplatelet effects



Implementing Strategies to Reduce Medication Related Falls

Deprescribing

- How essential is the medication
- Tapering
- Reduced dose or timing of doses
- Different medication

Comprehensive Medication Review Focused Visits

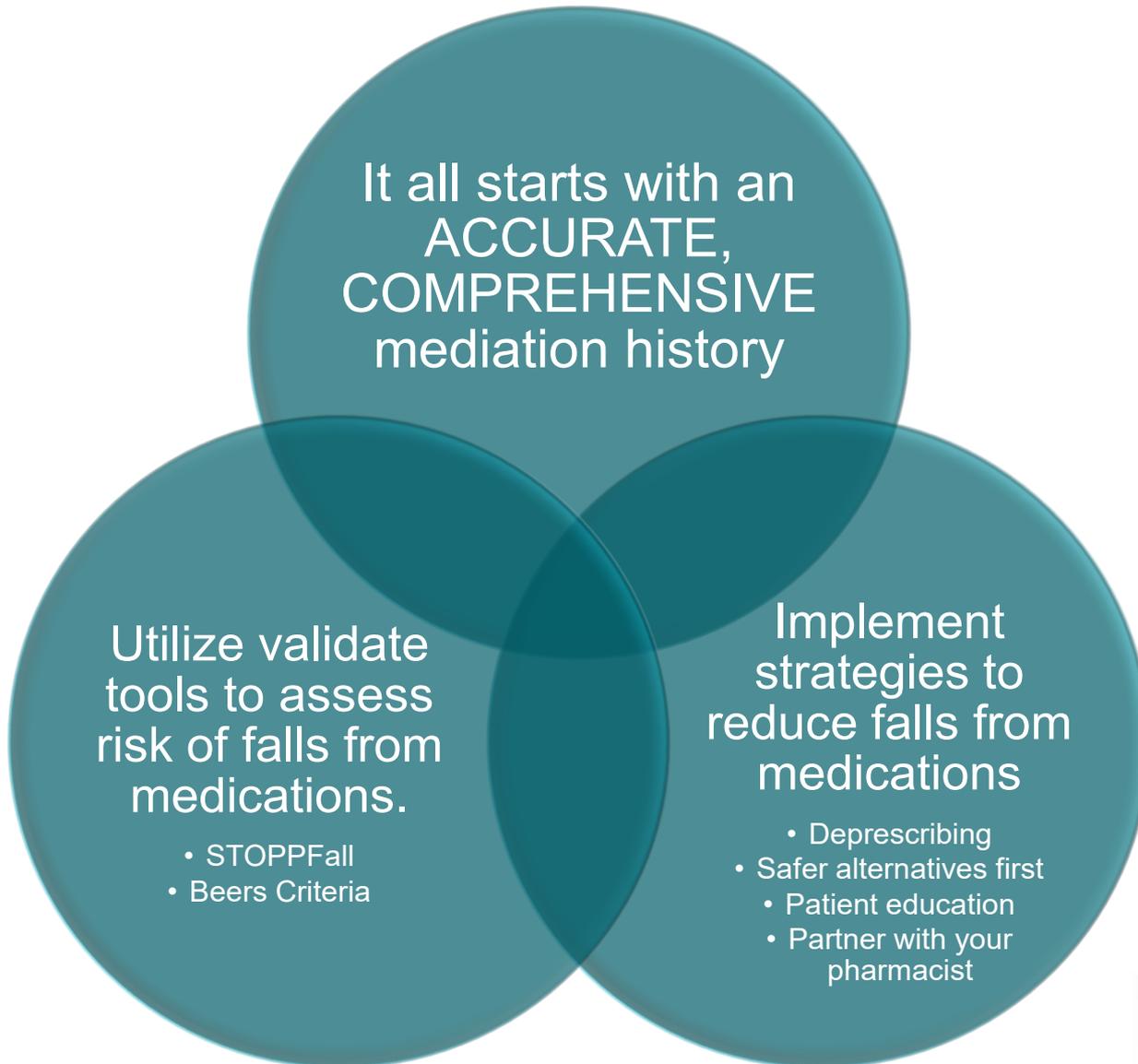
- Reduce overall polypharmacy

Educate caregivers and patients

Use your pharmacist!



Summary: Managing Medication & Falls



References and Resources

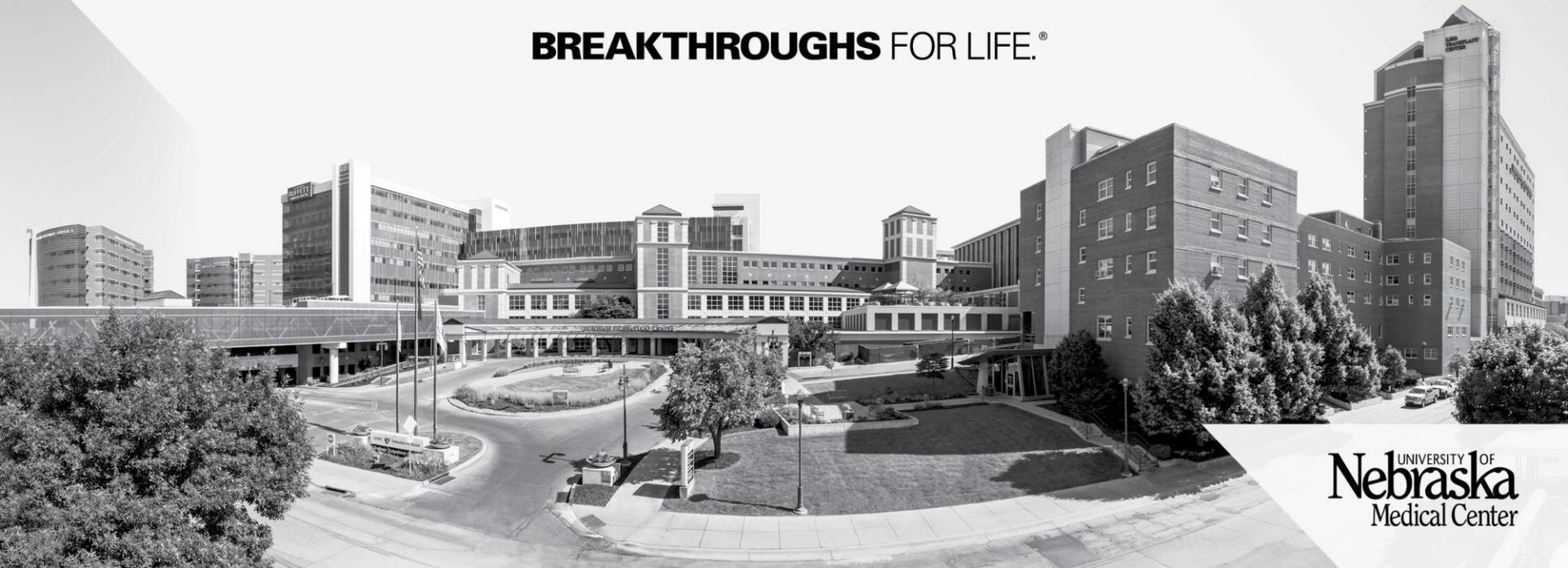
- [American Geriatrics Society 2023 Beers Criteria](#)
- [STOPPFall \(Screening Tool of Older Persons Prescriptions in older adults with high fall risk\)](#)
- [American Society of Consultant Pharmacists and National Council on Aging Falls Risk Reduction Toolkit Checklist](#)
- [STEADI- Older Adult Fall Prevention Pharmacy Care Tools](#)





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