Deprescribing polypharmacy

In aging patients

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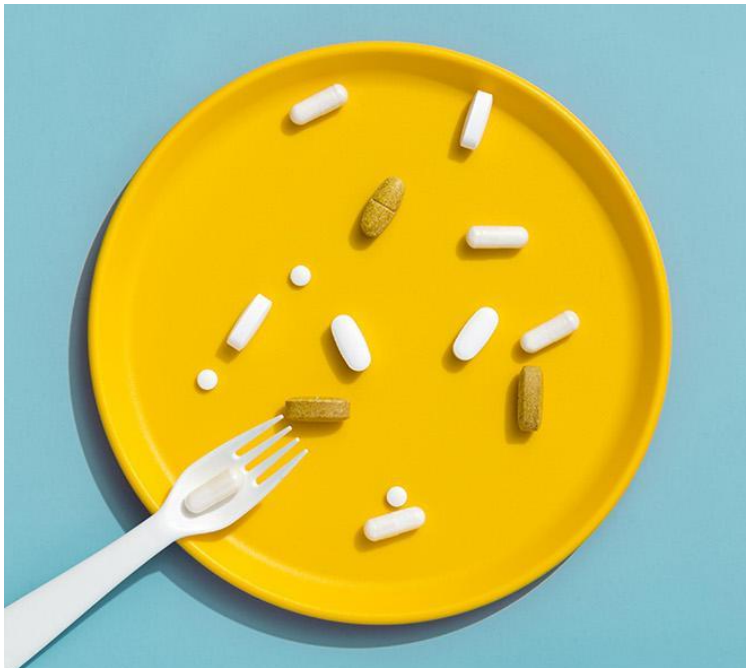
AAPA 2021 Conference



Deprescribing polypharmacy

In aging patients

No relevant commercial relations to disclose

OBJECTIVES

At the end of this session, participants should be able to:

1. Describe the scope of the problem of polypharmacy in aging patients
2. Access and utilize a fall risk checklist
3. Discuss the revisions to the Beers Criteria for Potentially Inappropriate Medication
4. Develop a plan to appropriately deprescribe in a patient receiving polypharmacy

10,000

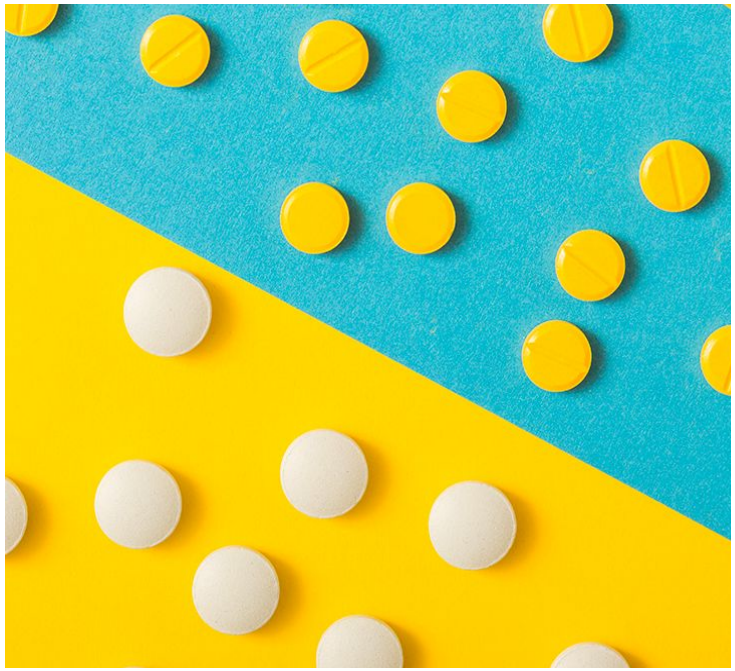
Over 10,000 people turn 65 years old every day in America[1]

2030

By 2030 all baby boomers will be at least 65 years old[1]

2034

By 2034 over 77 million Americans will be over 65 years old[1]



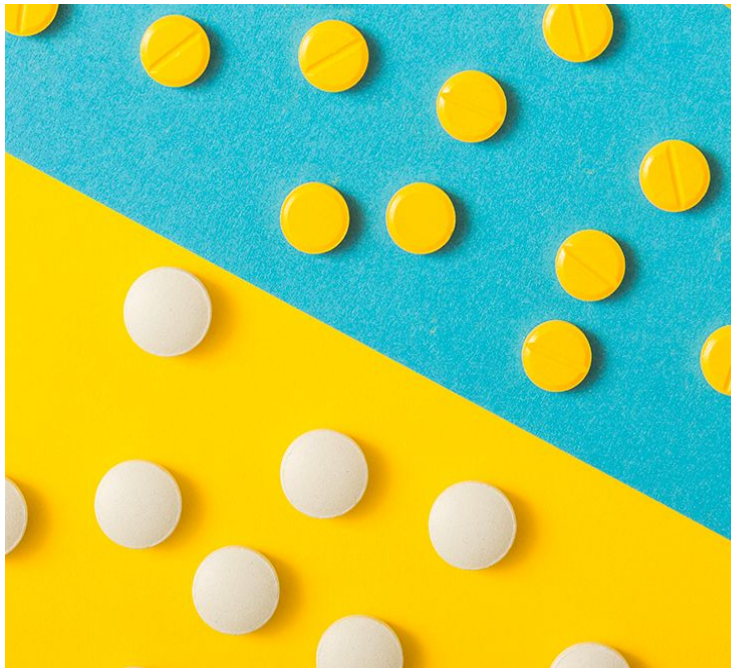
In general, Polypharmacy is defined as:

A) The prescription of two drugs that may interact to result in adverse effects.

B) Multiple medications prescribed to manage the same disease.

C) A single patient taking more than five drugs daily.

D) Multiple medications taken to manage comorbid conditions.



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Introduction

POLYPHARMACY IN THE ELDERLY:

1. The administration of more medications than clinically indicated.

2. Aging Americans take an average of five medications every day.[2]

3. As the population ages, medicine that was originally applicable can become irrelevant for multiple reasons.

Introduction

DEPRESCRIBING POLYPHARMACY:

1. **Medication dosage reduction or withdrawal to prevent complications.**[3]

2. **Patient's medications should be evaluated frequently to determine appropriateness, effectiveness, potential harm, and necessity.**[3]

3. **Deprescribing offers the benefits of fewer falls and fractures, improved cognition and quality of life.**[3]

Scope of polypharmacy problem

Polypharmacy in elderly population

1. Some patients cannot adhere to all their medicines due to barriers like cost or side effects.
2. Most elderly patients are overwhelmed taking medications multiple times a day.
3. They struggle to keep up with medication schedules.
4. Patients get confused when filling their pill boxes, ordering refills, and they need help.[4]

Question

True or false

Falls are an inevitable consequence of aging and are unpreventable?

False

Falls can be prevented by assessing each patient's balance, medications, lifestyle management, gait and intervening when appropriate.

Fall Risk

1. An elderly adult falls every second
2. 1 in 4 people 65 and older fall each year
3. There are 36 million elderly falls each year with 32,000 deaths
4. Unintentional injuries are the 7th leading cause of death among elderly adults
5. Falls are the primary cause of unintentional injury deaths in the elderly population
6. Each fall doubles the chance of an elderly person falling again
7. Elderly people have increased fall risk due to:
    A. Their age
    B. Low Vitamin D
    C. Poor footwear
    D. Lower body weakness leading to balance issues
    E. Vision changes
    F. Sex
    G. Race
    H. History of falls
    I. Trip and fall hazards such as steps, slippery floors, and loose rugs[5]

Fall risk checklist

Prior and current fall risk factors to identify

- Fall History
- Medical Conditions
- Medications (Prescriptions, OTC, Supplements)
- Gait, Strength, and Balance
- Vision
- Postural Hypotension[3]

Fall Risk Checklist

Circle YES or NO for each statement			**Why it matters**
Yes (2)	No (0)	I have fallen in the past year.	People who have fallen once are likely to fall again.
Yes (2)	No (0)	I use or have been advised to use a cane or walker to get around safely.	People who have been advised to use a cane or walker may already be more likely to fall.
Yes (2)	No (0)	Sometimes I feel unsteady when I am walking.	Unsteadiness or needing support while walking are signs of poor balance.
Yes (1)	No (0)	I steady myself by holding onto furniture when walking at home.	This is also a sign of poor balance.
Yes (1)	No (0)	I am worried about falling.	People who are worried about falling are more likely to fall.
Yes (1)	No (0)	I need to push with my hands to stand up from a chair.	This is a sign of weak leg muscles, a major reason for falling.
Yes (1)	No (0)	I have some trouble stepping up onto a curb.	This is also a sign of weak leg muscles.
Yes (1)	No (0)	I often have to rush to the toilet.	Rushing to the bathroom, especially at night, increases your chance of falling.
Yes (1)	No (0)	I have lost some feeling in my feet.	Numbness in your feet can cause stumbles and lead to falls.
Yes (1)	No (0)	I take medicine that sometimes makes me feel light-headed or more tired than usual.	Side effects from medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I take medicine to help me sleep or improve my mood.	These medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I often feel sad or depressed.	Symptoms of depression, such as not feeling well or feeling slowed down, are linked to falls.
Total:		Add up the number of points for each "yes" answer. If you scored 4 points or more, you may be at risk for falling.	

SCREENING REMINDER

Patient is a fall risk if:

Yes to any of the three key questions for patients:

1. **Feels unsteady when standing or walking**
2. **Worries about falling**
3. **Fallen in past year**[3]

Fall Risk Factors

Falls History	Present?	
Any falls in the past year?	Yes	No
Worries about falling or feels unsteady when standing or walking?	Yes	No
Medical Conditions		
Problems with heart rate and/or arrhythmia	Yes	No
Cognitive impairment	Yes	No
Incontinence	Yes	No
Foot problems	Yes	No
Other medical problems	Yes	No
Medications (prescriptions, OTCs, supplements)		
Psychoactive medications	Yes	No
Opioids	Yes	No
Medications that can cause sedation or confusion	Yes	No
Medications that can cause hypotension	Yes	No

Gait, Strength, & Balance	Present?	
Timed Up and Go (TUG) Test ≥12 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 Hypotension		
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

Timed up and Go (TUG) Assessment

Purpose: To assess patient mobility
Directions: Patients wear their regular footwear and can use their walking aid if needed. Begin by having the patient sit back in a standard chair and identify a line 10 feet away on the floor.
Instruct the patient: When I say "Go," I want you to:
*** Provider begins timing patient***

1. Stand up from the chair
2. Walk to the identified line on the floor at your normal pace
3. Turn around
4. Walk back to the chair at your normal pace
5. Sit down again ***Provider stops timing after patient sits down***
   Provider records time in seconds_____

A. An older adult who takes > 12 seconds to complete the TUG is at risk of falling.
B. Observe the patient's postural stability, gait, stride length, and sway.
C. Evaluate patient for slow tentative pace, shuffling, little or no arm swing, short strides, loss of balance, or not using assistance devices properly - These changes might signify neurological problems that require further evaluation.[3]

INTERVENTION - Chair Rise Exercise

What the exercise does: Strengthens the muscles in your thighs and buttocks.

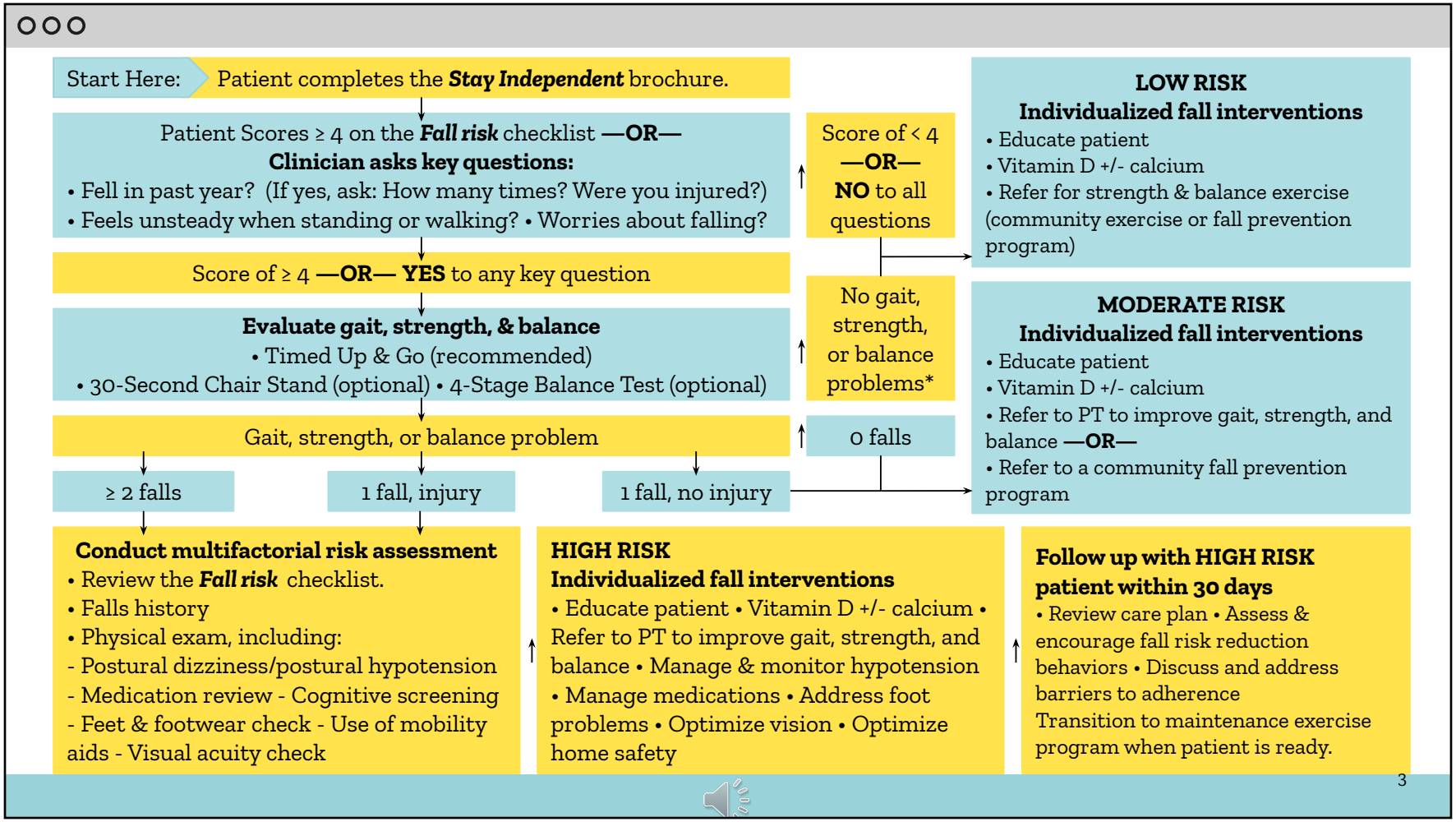
Goal: To do this exercise without using your hands as you become stronger.

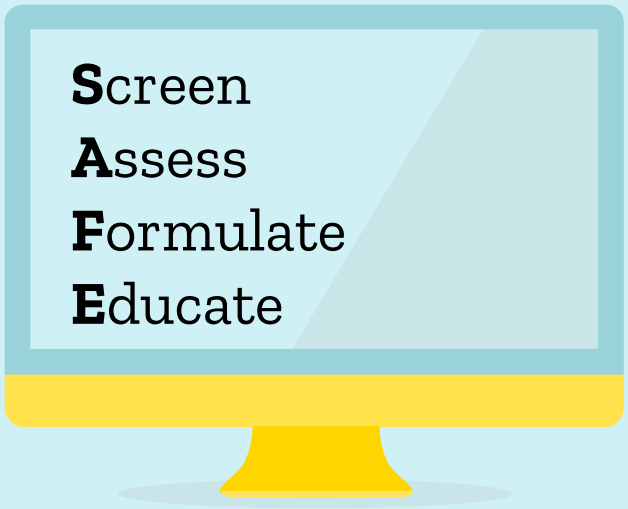
How to do the exercise:

1. Sit toward the front of a sturdy chair with your knees bent and feet flat on the floor, shoulder-width apart.
2. Rest your hands lightly on the seat on either side of you, keeping your back and neck straight, and chest slightly forward.
3. Breathe in slowly. Lean forward and feel your weight on the front of your feet.
4. Breathe out, and slowly stand up, using your hands as little as possible.
5. Pause for a full breath in and out.
6. Breathe in as your slowly sit down. Do not let yourself collapse back down into the chair. Rather, control your lowering as much as possible.
7. Breathe out.

Repeat 10-15 times. If this number is too hard for you when you first start practicing this exercise, begin with fewer and work up to this number.

Rest for a minute, then do a final set of 10-15.[3]


Start Here: Patient completes the Stay Independent brochure.
Patient Scores ≥ 4 on the Fall risk checklist —OR— Clinician asks key questions:
• Fell in past year? (If yes, ask: How many times? Were you injured?)
• Feels unsteady when standing or walking? • Worries about falling?
Score of < 4 —OR— NO to all questions
LOW RISK
Individualized fall interventions
• Educate patient
• Vitamin D +/- calcium
• Refer for strength & balance exercise (community exercise or fall prevention program)
Score of ≥ 4 —OR— YES to any key question
Evaluate gait, strength, & balance
• Timed Up & Go (recommended)
• 30-Second Chair Stand (optional) • 4-Stage Balance Test (optional)
No gait, strength, or balance problems*
MODERATE RISK
Individualized fall interventions
• Educate patient
• Vitamin D +/- calcium
• Refer to PT to improve gait, strength, and balance —OR—
• Refer to a community fall prevention program
Gait, strength, or balance problem
0 falls
≥ 2 falls
1 fall, injury
1 fall, no injury
Conduct multifactorial risk assessment
• Review the Fall risk checklist.
• Falls history
• Physical exam, including:
- Postural dizziness/postural hypotension
- Medication review - Cognitive screening
- Feet & footwear check - Use of mobility aids - Visual acuity check
HIGH RISK
Individualized fall interventions
• Educate patient • Vitamin D +/- calcium • Refer to PT to improve gait, strength, and balance • Manage & monitor hypotension • Manage 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 reduction behaviors • Discuss and address barriers to adherence
Transition to maintenance exercise program when patient is ready.



SAFE Medication Review

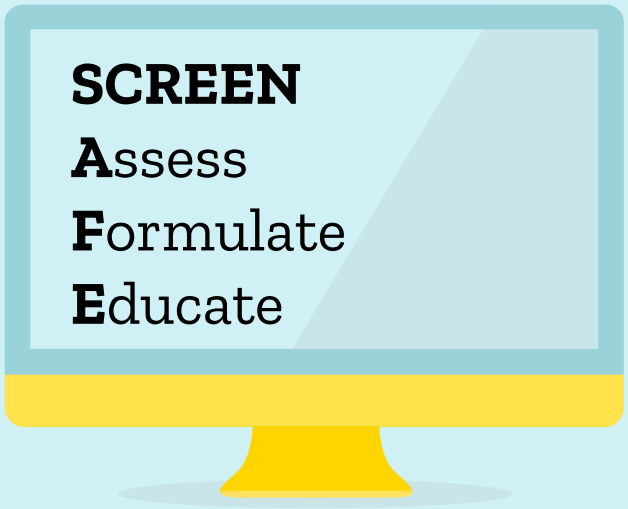
Use the **SAFE** review to:

Screen for medications that may increase fall risk

Assess the patient to best manage health conditions

Formulate the patient's medication plan

Educate the patient and caregivers about medication changes and fall prevention strategies[3]



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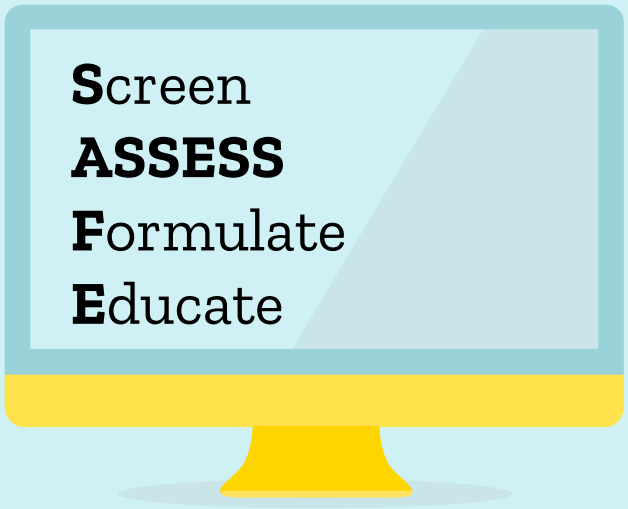

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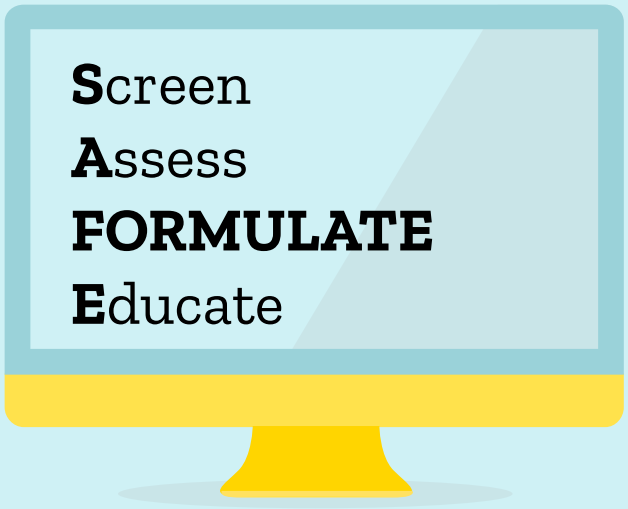

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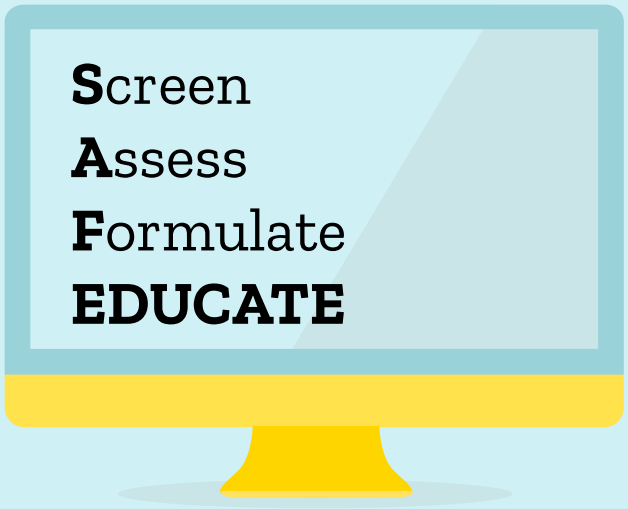

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Question

Adverse drug reactions (ADRs) often involve

A) Opioids
B) Anticoagulants
C) Anticonvulsants
D) All of the above

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2019 Beers Criteria Inappropriate Medications

Risky medications are listed in the criteria to increase awareness of POTENTIAL fall risk medications and assist with determining drugs to avoid in older adults.

- The 2019 beers criteria includes five lists of almost 100 medication or medication classes to avoid or use with caution in elderly adults.
- This includes 30 individual medication or medication classes to avoid for most older people.
- The 2019 beers criteria also includes 40 medications or medication classes to use with caution or avoid when a patient has specific diseases or conditions.
- 25 medications or medication classes were dropped from the most recent beers criteria and others were moved to new categories or had revisions based on current literature and evidence.[6]

We will review the medications linked to POTENTIAL FALL RISK in the elderly population.

2019 Beers Criteria Inappropriate Medications

There are five types of criteria for a potentially inappropriate medication to be listed in the Beers Criteria

- Medications that are potentially inappropriate in most older adults.
- Medications that should be typically avoided in older adults with certain conditions.
- Medications to use with caution.
- Drug to drug interactions.
- Drug dose adjustment based on kidney function.[6]

Beers Criteria for Inappropriate Medication risk outweighs the benefit for most aging patients

2019 Beers Criteria Inappropriate Medications

#1 Anticholinergics- antihistamines

- Over-the-counter sleeping aids, as well as other prescription drugs that block the neurotransmitter acetylcholine.
- Can cloud thinking and are associated with developing dementia.
- Special concern in patients with a history of falling or prior fractures.
- Very small benefit for cognition and functional status.
- Alternatives: Consider using nasal saline for allergies and non-pharmacological sleep aids.[6]

2019 Beers Criteria Inappropriate Medications

#2 Anticonvulsants

- Sometimes used to manage difficult behaviors in dementia or Alzheimer's patients.
- Associated with increased fall risk, unsteady gait, psychomotor impairment, syncope.
- Associated with dizziness, drowsiness, fatigue and tremors.
- Recommend reducing dosages and tapering to lowest possible dosage.
- Consider using bone protection.
- Alternatives: Consider cautious dosing.[6]

2019 Beers Criteria Inappropriate Medications

#3 Antidepressants

- Almost all antidepressants have been associated with increased fall risk.
- Increased risk of unsteady gait, psychomotor impairment, syncope.
- Can cause confusion, cognitive impairment, sedation, orthostatic hypotension.
- Alternatives: Consider reducing dosage, reducing concomitant medications that cause falls, employ fall prevention strategies.[6]

2019 Beers Criteria Inappropriate Medications

#4 Antihyperglycemics

- Used in elderly patients with A1c 7-8%.
- Higher risk of hypoglycemia without improvement in hyperglycemia management without vigilant care and monitoring.
- Can cause or worsen hypoglycemia and associated fall risks.
- Associated with severe prolonged hypoglycemia.
- Alternatives: dietary changes, consider cautious dosing.[6]

2019 Beers Criteria Inappropriate Medications

#5 Antihypertensives

- Commonly used to treat elevated blood pressure.
- Associated with orthostatic hypotension, bradycardia, CNS adverse effects.
- Mixed clinical evidence linking to falls but recommend reducing dosages and tapering to lowest possible dosage.
- Alternatives: Low sodium diet, lower processed foods, exercise.[6]

2019 Beers Criteria Inappropriate Medications

#6 Antipsychotics

- Originally developed to treat schizophrenia and other illnesses with psychotic symptoms.
- Prescribed to control dementia and other Alzheimer's behaviors.
- Associated with increased confusion, cognitive impairment and falls.
- Increased risk of stroke, cognitive decline, and worsening delirium.
- Unclear benefit and increased risk of mortality due to falls.
- Taper dosing 25 to 50% every 1 to 2 weeks until discontinued.
- Alternatives: Reserve for patients with severe psychosis and employ fall-prevention strategies when unable to deprescribe.[6]

2019 Beers Criteria Inappropriate Medications

#7 Benzodiazepines

- Often prescribed to help with anxiety or help people sleep.
- Habit forming, increased sensitivity and impaired metabolism issues.
- High risk of falls, delirium, accidents, cognitive impairment, psychomotor impairment.
- Slow taper withdrawal of 25% every 2 weeks under medical supervision.
- Alternatives: Counseling, exercise programs, physical therapy, sleep hygiene regimen and non-pharmacological sleep aids.[6]

2019 Beers Criteria Inappropriate Medications

#8 Opioids

- Limited benefit, appropriate for recent joint replacement or acute severe pain such as fracture.
- Little evidence of improvement in OA or chronic pain disorders.
- High risk of falls, drowsiness, cognitive impairment, psychomotor impairment.
- Increased risk of sedation, respiratory depression, delirium, unintentional overdose, and death.
- Slow taper withdrawal of 10% per week.
- Alternatives: physical therapy, TENS units, topical NSAIDS.[6]

Question:

Deprescribing Polypharmacy should occur when?

A) A patient has adverse drug reactions and additional drugs have been prescribed to control the symptoms of this reaction.
B) A patient has a limited life expectancy.
C) When a patient experiences an injury resulting from medical intervention related to a drug.
D) A patient's condition deteriorates as a result of his or her medication regimen.

Question:

Deprescribing Polypharmacy should occur when?

A) **A patient has adverse drug reactions and additional drugs have been prescribed to control the symptoms of this reaction.**

B) **A patient has a limited life expectancy.**

C) **When a patient experiences an injury resulting from medical intervention related to a drug.**

D) **A patient's condition deteriorates as a result of his or her medication regimen.**

Polypharmacy Deprescribing Plan

Deprescribing is the process of medication dosage reduction or withdrawal to prevent complications whether the medication is prescribed or over the counter.[2,3]

Polypharmacy Deprescribing Plan
Step 1

Review and reconcile all medications

- Review all prescribed and over-the-counter medications
- Assess patient adherence
- Assess medication indication[2,3]

Polypharmacy Deprescribing Plan
Step 2

Risk versus benefit

- Use patient centered approach
- Adverse drug Event
- Drug interactions
- Drug to disease interactions[2,3]

Polypharmacy Deprescribing Plan
Step 3

Assess Individual drug eligibility

- Is the medication effective
- Current indication or have symptoms resolved
- Prescribing cascade
- Unacceptable risk
- Unacceptable treatment burden (monitoring required or administration hurdles)
- Benefit during patient's lifespan[2,3]

Polypharmacy Deprescribing Plan
Step 4

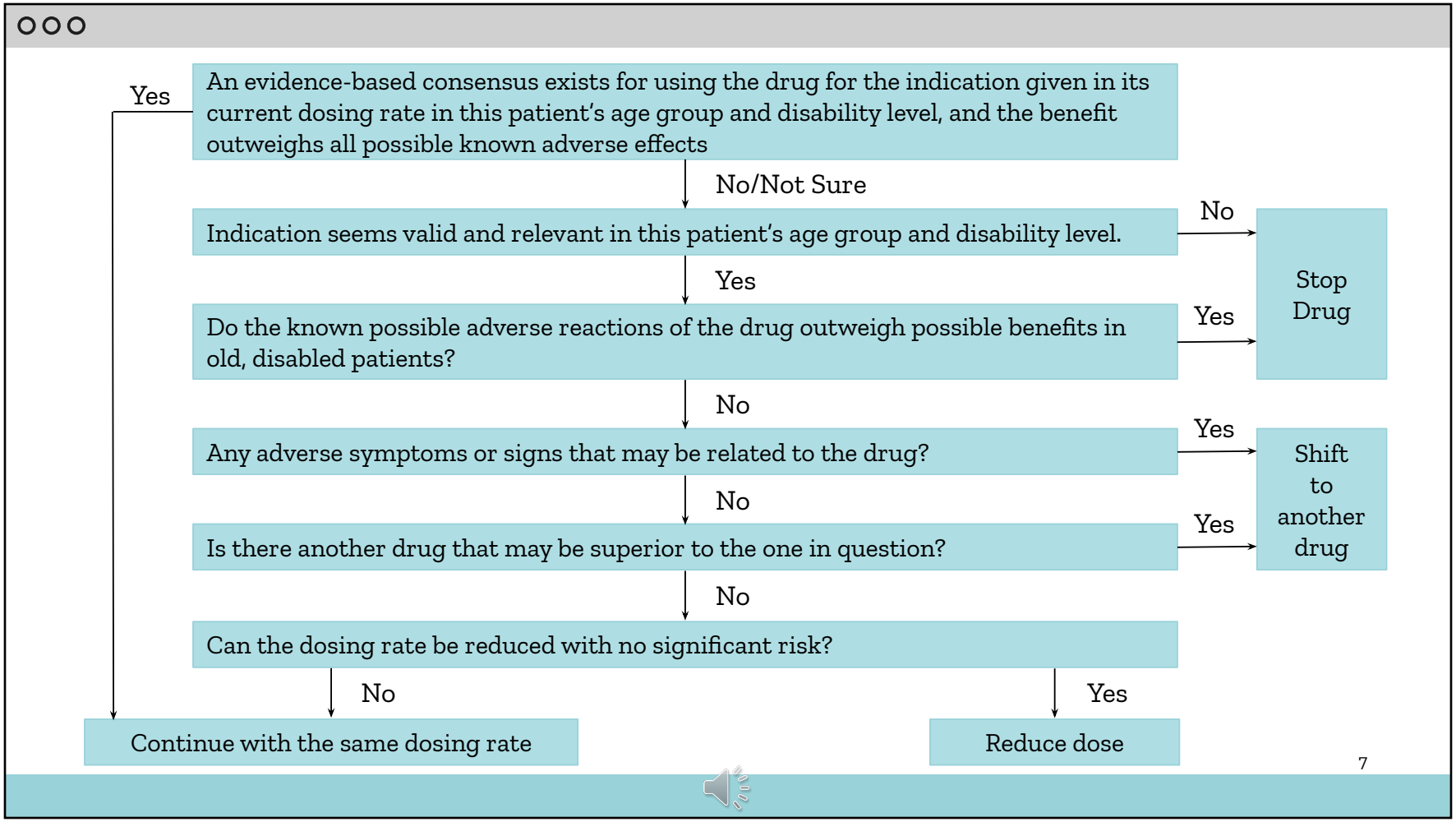
Prioritize medications for discontinuation

- Risk versus benefit
- Risk for adverse drug withdrawal events
- Patient preferences
- Ease of discontinuation[2,3]

Polypharmacy Deprescribing Plan
Step 5

Implementing and monitoring protocol

- Stepwise approach based on medication priority
- Taper medications using practice guidelines, if available
- Monitor patient for physiological withdrawal
- Monitor patient for return of symptoms
- Monitor patient for worsening of disease[2,3]


An evidence-based consensus exists for using the drug for the indication given in its current dosing rate in this patient's age group and disability level, and the benefit outweighs all possible known adverse effects
Yes
No/Not Sure
Indication seems valid and relevant in this patient's age group and disability level.
No
Stop Drug
Yes
Do the known possible adverse reactions of the drug outweigh possible benefits in old, disabled patients?
Yes
No
Any adverse symptoms or signs that may be related to the drug?
Yes
Shift to another drug
No
Is there another drug that may be superior to the one in question?
Yes
No
Can the dosing rate be reduced with no significant risk?
No
Yes
Continue with the same dosing rate
Reduce dose

TAKE HOME POINTS

1. The polypharmacy problem in aging patients
2. How to access and utilize a fall risk checklist
3. Understand the Beers Criteria for Potentially Inappropriate Medication
4. How to develop and utilize a plan to appropriately deprescribe patients with polypharmacy

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THANKS

Do you have any questions?
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