

Age Friendly Medication Management

Responsible Medication Management in Older Adults

Objectives

Promote safe medication management for elderly patients:

- ▶ Recognize age-related physiologic changes that effect medication efficacy and safety.
- ▶ Discuss the dangers of polypharmacy.
- ▶ Identify potentially inappropriate medications to avoid or mitigate.
- ▶ Review specific medications that pose a risk to elderly patients.
- ▶ Understand the principles of comprehensive medication review and reconciliation.

Overview

- ▶ The average number of medications prescribed to older adults has been steadily increasing over the years.
- ▶ It is estimated that 20% of Medicare beneficiaries have 5 or more chronic conditions and 50% receive 5 or more medications.
- ▶ Multiple medications in older adults are likely to increase the risk of falls, cognitive impairment, hospitalization and mortality.

Physiologic Changes in the Elderly

- ▶ Increase in body fat and decrease in body water = changes in drug distribution and protein binding.
- ▶ Decrease in renal clearance = increased risk of drug accumulation.
- ▶ Declining liver function = reduced first pass metabolism and reduced clearance of drugs metabolized by CYP-450.
- ▶ Increased sensitivity to CNS active medications (anticholinergics, sedatives, opioids).

Polypharmacy

Polypharmacy is defined as the use of multiple medications by a patient (usually 5 or more).

Polypharmacy puts patients at increased risk:

- ▶ More potential for drug interactions.
- ▶ Potential for “prescribing cascade” where an adverse drug reaction is interpreted as a new medical condition and even more drug therapy is prescribed.
- ▶ Higher risk for falls leading to fracture and hospitalization.

CMS Drug Utilization Review: Recommendations

Target the following prescription drug classes:

- ▶ Digoxin
- ▶ Calcium channel blockers
- ▶ Anticholinergics
- ▶ ACE Inhibitors
- ▶ H2 receptor antagonists
- ▶ NSAIDs
- ▶ Benzodiazepines
- ▶ Antipsychotics
- ▶ Antidepressants

Focus on the following prescribing patterns:

- Inappropriate dose
- Inappropriate duration of therapy
- Duplication of therapy
- Potential for drug-drug interactions

Anticholinergic Drugs

- ▶ Drugs with anticholinergic properties are commonly used by elderly patients for conditions such as overactive bladder, Parkinson's symptoms, insomnia, anxiety, allergies and common cold.
- ▶ Older adults are particularly susceptible to anticholinergic effects. Taking multiple anticholinergic medications has a cumulative effect and results in a high anticholinergic burden.
- ▶ Anticholinergic medications can result in numerous CNS effects including memory impairment, confusion, hallucinations and worsening dementia.
- ▶ Other effects include constipation, urinary retention, dry mouth and blurred vision.

Anxiolytics and Hypnotics

- ▶ The American Geriatric Society recommends avoiding benzodiazepines and non-benzodiazepine hypnotics for insomnia, agitation or delirium.
- ▶ These drugs are associated with cognitive decline, dependence and withdrawal, falls and fractures.
- ▶ If required, use short-acting benzodiazepines at the lowest dose for the shortest duration possible.

Antipsychotics

- ▶ Antipsychotics are often used off-label to manage behavioral symptoms of dementia.
- ▶ FDA issued a black box warning about increased risk of death and cerebrovascular events in dementia patients treated with atypical antipsychotics.
- ▶ Older patients are at an increased risk for tardive dyskinesia.
- ▶ Additional adverse effects include sedation, orthostatic hypotension, QT prolongation, weight gain and anticholinergic effects.

Non-steroidal Anti-inflammatory Drugs (NSAIDS)

NSAIDS are commonly prescribed for pain and inflammatory conditions. They are also available without a prescription.

Older adults are prone to the following adverse effects from this drug class:

- Peptic ulcer disease and GI bleed
- NSAID induced nephrotoxicity
- Fluid retention and edema
- Increased risk of MI, stroke and hypertension

Approach to Prescribing

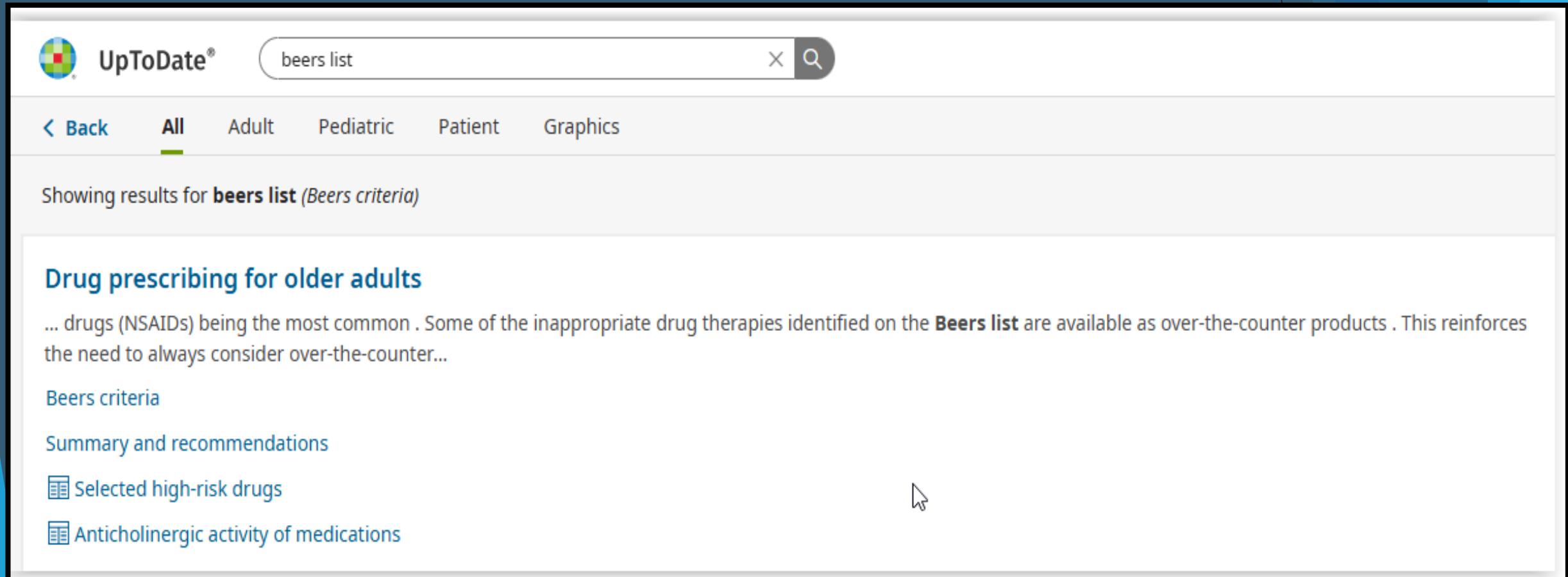
- ▶ Assess the current medication regimen for potentially inappropriate medications:
 - ▶ Medication reviews should occur upon admission, during transitions of care and at discharge.
- ▶ Discontinue unnecessary therapy:
 - ▶ Some medications may need to be gradually tapered off.
- ▶ Consider adverse drug events for any new symptom:
 - ▶ Before adding new therapy, consider whether the symptoms may be an adverse effect of an existing medication.

Approach to Prescribing

- ▶ Consider non-pharmacologic approaches:
 - ▶ Lifestyle modifications may be appropriate for some conditions.
- ▶ Reduce the dose:
 - ▶ Use the minimal dose required to maintain clinical response.
- ▶ Perform adequate medication monitoring
 - ▶ Document outcomes and watch for adverse effects
- ▶ Use tools such as the Beers Criteria, Screening Tool of Older Persons' Prescriptions (STOPP), Screening Tool to Alert to Right Treatment (START) to identify and avoid inappropriate medications.

The Beers Criteria

- ▶ The Beers Criteria and Medication Charts can be located in UpToDate (Search Beers List). (UpToDate is in Soarian Link or Crouse Home Page in Medical Staff Section).
- ▶ The Beers criteria is a list of medications that are considered inappropriate in elderly patients.



The screenshot shows a web browser displaying the UpToDate platform. The search bar at the top contains the text "beers list". Below the search bar, a navigation menu includes "Back", "All" (which is underlined in green), "Adult", "Pediatric", "Patient", and "Graphics". The main content area displays the results for the search, starting with a section titled "Drug prescribing for older adults". Below this, there is a summary of the Beers criteria and links to "Selected high-risk drugs" and "Anticholinergic activity of medications".

UpToDate®

beers list

Back All Adult Pediatric Patient Graphics

Showing results for **beers list** (Beers criteria)

Drug prescribing for older adults

... drugs (NSAIDs) being the most common. Some of the inappropriate drug therapies identified on the **Beers list** are available as over-the-counter products. This reinforces the need to always consider over-the-counter...

Beers criteria

Summary and recommendations

Selected high-risk drugs

Anticholinergic activity of medications

References

- ▶ Ruscin JM, Linnebur SA, Wasserman MR. (2025) Overview of Pharmacologic Therapy in Older Adults. Merck Manual Professional Edition. Merck and Co., Inc. Accessed 9/30/2025.
- ▶ Rochon PA. Drug Prescribing for older adults. UpToDate, last updated 8/27/2025, accessed 9/30/2025.
- ▶ Kim LD, Koncija K, Nielson C. Medication management in older adults. Cleveland Clinic Journal of Medicine 2018 Feb; 85 (2) 129-135.