

# 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

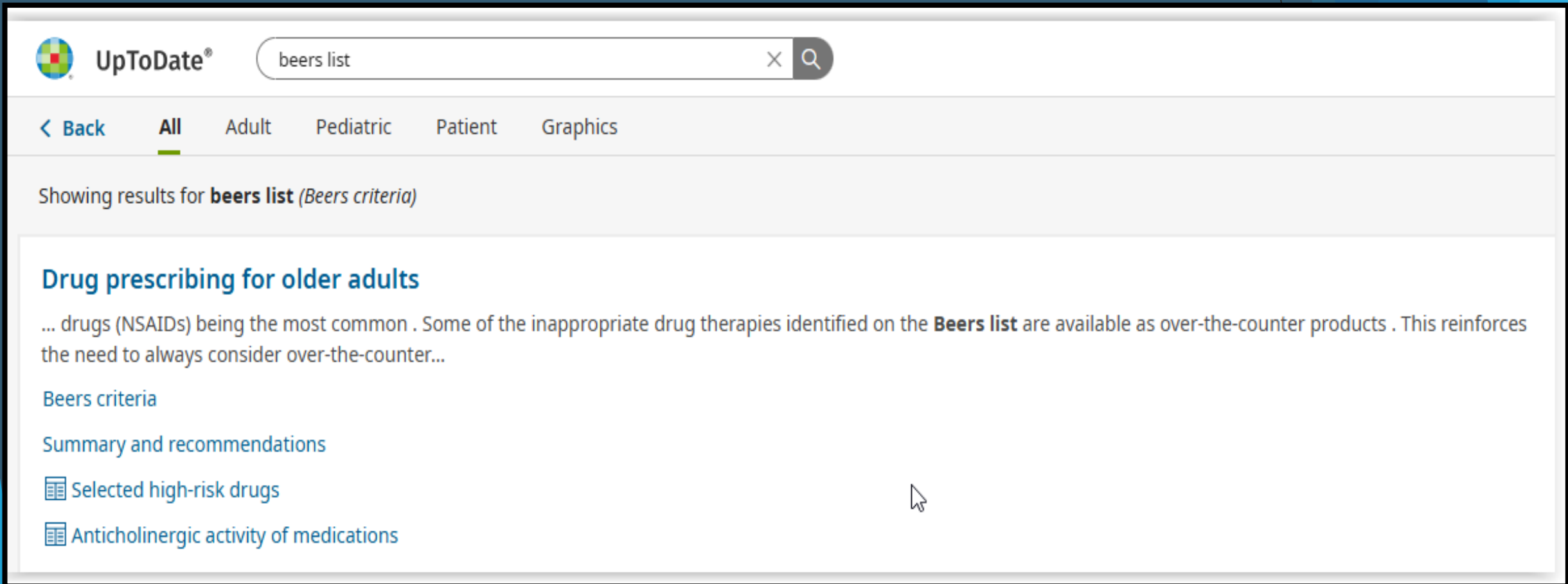
- ▶ Assess the current medication regimen for potentially inappropriate medications:
  - ▶ Medication reviews should occur upon admission, during transitions of care and at discharge.
- ▶ Discontinue unnecessary therapy:
  - ▶ Some medications may need to be gradually tapered off.
- ▶ Consider adverse 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 displays the UpToDate web interface. At the top left is the UpToDate logo. To its right is a search bar containing the text 'beers list' with a clear (X) and search (magnifying glass) button. Below the search bar is a navigation bar with links: '< Back', 'All' (which is underlined), 'Adult', 'Pediatric', 'Patient', and 'Graphics'. Below this bar, a message states 'Showing results for **beers list** (Beers criteria)'. The main content area features a section titled 'Drug prescribing for older adults' in blue. Below this title is a paragraph: '... 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...'. Further down, there are four links, each preceded by a small icon of a document with lines: 'Beers criteria', 'Summary and recommendations', 'Selected high-risk drugs', and 'Anticholinergic activity of medications'. A mouse cursor is visible over the 'Selected high-risk drugs' link.

# 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.