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# Medication Assessment in The Older Adult: Using the Beer's List


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CENTRACARE Health

## Purpose of the Education

- Describe appropriate pharmacologic principles of medication use in older adults
- Review Beer's List Criteria (American Geriatric Society)
- Identify inappropriate and/or overlooked medication for the older adult
- Share with BH Unit staff, patients, families

## Education Pointers

- Always have detailed list of medications and reasons for use
- For patients with dementia or cognitive decline, POA/guardian needs to have this information and make sure it is readily available during a hospitalization
- Bring all medications to outpatient visits
- Work with the older adult to keep medication up-to-date and dispose of older prescription drugs and OTC medication
- Meet with Pharmacist for medication reconciliation

## Beers List Red Flag Mediations

- **Diphenhydramine (many OTC products): Tylenol PM, Advil PM, Equate Sleep Aid—anticholinergic, constipation, risk of dementia**
- **Benzodiazepines: alprazolam, diazepam, clonazepam, lorazepam-altered mental status**
- **Opioids: worst offenders are fentanyl, oxycodone-overdose**

## Unit Education about Medications according to American Geriatric Society Beer's Criteria for potentially Inappropriate Medications for the Older Adult

**Changes in older adults that contribute to problems with adverse side-effects**

- Age related changes in pharmacokinetics (absorption, distribution, metabolism, excretion)
- Pharmacodynamics (physiologic effects of the medication)
- Cautions with increase in relative body fat and decline in CrCl
- Decreased clearance prolongs medication half-lives
- Increased sensitivity to effects of selected drugs
- Polypharmacy and changes in hepatic function creates variability in drug metabolism
- **American Geriatric Society Beer's Criteria**

Table 1 (continued from page 2)

TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults

| Organ System/ Therapeutic Category/Drug(s) | Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR) |
|---|---|
| Nifedipine, immediate release* | **Avoid.** Potential for hypotension; risk of precipitating myocardial ischemia. QE = High; SR = Strong |
| Spironolactone >25 mg/day | **Avoid in patients with heart failure or with a CrCl <30 mL/min.** In heart failure, the risk of hyperkalemia is higher in older adults if taking >25 mg/day. QE = Moderate; SR = Strong |
| Central Nervous System | |
| Tertiary TCAs, alone or in combination: Amitriptyline; Chlordiazepoxide-amitriptyline; Clomipramine; Doxepin >6 mg/day; Imipramine; Perphenazine-amitriptyline; Trimipramine | **Avoid.** Highly anticholinergic, sedating, and cause orthostatic hypotension; the safety profile of low-dose doxepin (≤6 mg/day) is comparable to that of placebo. QE = High; SR = Strong |
| Antipsychotics, first- (conventional) and second- (atypical) generation (see online for full list) | **Avoid use for behavioral problems of dementia unless non-pharmacologic options have failed and patient is threat to self or others.** Increased risk of cerebrovascular accident (stroke) and mortality in persons with dementia. QE = Moderate; SR = Strong |
| Thioridazine; Mesoridazine | **Avoid.** Highly anticholinergic and greater risk of QT-interval prolongation. QE = Moderate; SR = Strong |
| Barbiturates: Amobarbital*; Butabarbital*; Butalbital; Mephobarbital*; Pentobarbital*; Phenobarbital; Secobarbital* | **Avoid.** High rate of physical dependence; tolerance to sleep benefits; greater risk of overdose at low dosages. QE = High; SR = Strong |
| Benzodiazepines. Short- and intermediate-acting: Alprazolam; Estazolam; Lorazepam; Oxazepam; Temazepam; Triazolam. Long-acting: Clorazepate; Chlordiazepoxide; Chlordiazepoxide-amitriptyline; Clidinium-chlordiazepoxide; Clonazepam; Diazepam; Flurazepam; Quazepam | **Avoid benzodiazepines (any type) for treatment of insomnia, agitation, or delirium.** Older adults have increased sensitivity to benzodiazepines and decreased metabolism of long-acting agents. In general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle accidents in older adults. May be appropriate for seizure disorders, rapid eye movement sleep disorders, benzodiazepine withdrawal, ethanol withdrawal, severe generalized anxiety disorder, periprocedural anesthesia, end-of-life care. QE = High; SR = Strong |
| Chloral hydrate* | **Avoid.** Tolerance occurs within 10 days and risk outweighs the benefits in light of overdose with doses only 3 times the recommended dose. QE = Low; SR = Strong |
| Meprobamate | **Avoid.** High rate of physical dependence; very sedating. QE = Moderate; SR = Strong |



Table 1 (continued on page 4)

Table 1 (continued from page 3)

TABLE 1: 2012 AGS Beers Criteria for Potentially Inappropriate Medication Use in Older Adults

| Organ System/ Therapeutic Category/Drug(s) | Recommendation, Rationale, Quality of Evidence (QE) & Strength of Recommendation (SR) |
|---|---|
| Nonbenzodiazepine hypnotics: Eszopiclone; Zolpidem; Zaleplon | **Avoid chronic use (>90 days)** Benzodiazepine-receptor agonists that have adverse events similar to those of benzodiazepines in older adults (e.g., delirium, falls, fractures); minimal improvement in sleep latency and duration. QE = Moderate; SR = Strong |
| Ergot mesylates*; Isoxsuprine* | **Avoid.** Lack of efficacy. QE = High; SR = Strong |
| Endocrine | |
| Androgens: Methyltestosterone*; Testosterone | **Avoid unless indicated for moderate to severe hypogonadism.** Potential for cardiac problems and contraindicated in men with prostate cancer. QE = Moderate; SR = Weak |
| Desiccated thyroid | **Avoid.** Concerns about cardiac effects; safer alternatives available. QE = Low; SR = Strong |
| Estrogens with or without progestins | **Avoid oral and topical patch. Topical vaginal cream: Acceptable to use low-dose intravaginal estrogen for the management of dyspareunia, lower urinary tract infections, and other vaginal symptoms.** Evidence of carcinogenic potential (breast and endometrium); lack of cardioprotective effect and cognitive protection in older women. Evidence that vaginal estrogens for treatment of vaginal dryness is safe and effective in women with breast cancer, especially at dosages of estradiol <25 mcg twice weekly. QE = High (Oral and Patch), Moderate (Topical); SR = Strong (Oral and Patch), Weak (Topical) |
| Growth hormone | **Avoid, except as hormone replacement following pituitary gland removal.** Effect on body composition is small and associated with edema, arthralgia, carpal tunnel syndrome, gynecomastia, impaired fasting glucose. QE = High; SR = Strong |
| Insulin, sliding scale | **Avoid.** Higher risk of hypoglycemia without improvement in hyperglycemia management regardless of care setting. QE = Moderate; SR = Strong |
| Megestrol | **Avoid.** Minimal effect on weight; increases risk of thrombotic events and possibly death in older adults. QE = Moderate; SR = Strong |
| Sulfonylureas, long-duration: Chlorpropamide; Glyburide | **Avoid.** Chlorpropamide: prolonged half-life in older adults; can cause prolonged hypoglycemia; causes SIADH. Glyburide: higher risk of severe prolonged hypoglycemia in older adults. QE = High; SR = Strong |
| Gastrointestinal | |
| Metoclopramide | **Avoid, unless for gastroparesis.** Can cause extrapyramidal effects including tardive dyskinesia; risk may be further increased in frail older adults. QE = Moderate; SR = Strong |
| Mineral oil, given orally | **Avoid.** Potential for aspiration and adverse effects; safer alternatives available. QE = Moderate; SR = Strong |
| Trimethobenzamide | **Avoid.** One of the least effective antiemetic drugs; can cause extrapyramidal adverse effects. QE = Moderate; SR = Strong |



Table 1 (continued on page 5)

## Polypharmacy in Older Adults

- **Polypharmacy means more than 5 medications**
- Common in the older adult

**Prescription use by elderly adults (62-85 years)**

- At least one medication used by 87%
- 5 or more prescriptions by 36%

  Over the counter medications by 38%
- Medicare beneficiaries discharged from hospital to SNF used an average of 14 medications

## References


Alldred, D. P., Kennedy, M. C., & Hughes, C. (2016). Interventions to optimize prescribing for older people in care homes. *Cochrane Database Systematic Review, 2,*

American Geriatrics Society. (2015). Beers Criteria update expert panel: Updated Beers Criteria for potentially inappropriate medication use in older adults. *Journal of the American Geriatric Society, 63,* 2227

Davidoff, A. J., Miller, G. E., Sarpong, E. M. (2015). Prevalence of potentially inappropriate medication use in older adults using the 2012 Beers Criteria. *Journal of the American Geriatric Society, 63,* 486.

Qato, D. M., Wilder, J., & Schumm, L. P. (2016). Changes in prescription and over-the-counter medication and dietary supplement use among older adults in the United States, 2005 vs 2011 *Journal of the American Medical Association Internal Medicine, 176,* 473-

Saraf, A. A., Petersen, A. W., Simmons, S. F. (2016). Medications associated with geriatric syndromes and their prevalence in older hospitalized adults discharge to skilled nursing facilities. *Journal of Hospital Medicine, 11,* 694