

# 2019 American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication (PIM) Use in Older Adults

## Key Highlights:

- Healthcare teams should proactively reconcile medications for older adults and eliminate PIMs when possible.
- Health care professionals should engage in active communication with each other and across care transitions to enable appropriate selection of medication for the elderly.
- The beers guideline should be utilized as an essential tool to identify and improve medication appropriateness and safety.
- One study found that >50% of older adults used at least 1 PIM during more than 10% of the study period.
- **Nonsteroidal anti-inflammatory drugs were the most common class of PIM.** Use of a PIM was independently associated with a higher risk for hospitalization.
- **H2-receptor antagonists** were removed from the "avoid" list among adults with dementia or cognitive impairment. The degree of evidence that these drugs cause negative cognitive effects is weak. However, H2-receptor antagonists should still be avoided among patients with delirium.
- **Glimepiride** was added to the list of sulfonylureas, which can increase the risk for severe prolonged hypoglycemia.
- **Serotonin-norepinephrine reuptake inhibitors** (duloxetine, venlafaxine etc.) were added to the list of drugs to avoid among adults with a history of falls or fractures.
- Although **most antipsychotic medications** should be avoided among patients with Parkinson disease, quetiapine, clozapine, and pimavanserin may be preferred in this setting.
- **Nondihydropyridine calcium channel blockers** (diltiazem, verapamil) should not be used among patients with heart failure. **Nonsteroidal anti-**

**inflammatory drugs** and **thiazolidinediones** (pioglitazone, rosiglitazone) should be used with caution in cases of heart failure.

- The age limit for the safe use of **aspirin** as primary prophylaxis against cardiovascular disease and colorectal cancer was lowered from 80 to 70 years.
- **Rivaroxaban** was added to **dabigatran** as increasing the risk for gastrointestinal bleeding compared with warfarin and other direct oral anticoagulants among adults at age 75 years and older.
- **Dextromethorphan/quinidine** (Nudexta) is deemed inappropriate in the treatment of the behavioral symptoms of dementia. This drug has limited evidence of efficacy and may increase the risk for falls and drug interactions. This recommendation did not apply to the treatment of pseudobulbar affect.
- Multiple drugs should be avoided because of their associated risk for **hyponatremia and syndrome** of inappropriate diuretic hormone, including **carbamazepine, diuretics, tramadol, and multiple forms of antidepressants**.
- **Trimethoprim-sulfamethoxazole** was cited for its associated risk for hyperkalemia when used with a renin-angiotensin inhibitor in the setting of reduced creatinine clearance. Trimethoprim-sulfamethoxazole can also increase the risk for phenytoin toxicity and bleeding among patients treated with warfarin. Finally, trimethoprim-sulfamethoxazole was added to the warning list among older adults with renal dysfunction.
- **Nonsteroidal anti-inflammatory drugs** should be avoided if possible among older adults, especially for prolonged periods of treatment. The authors note that indomethacin is associated with the highest rate of adverse effects of all nonsteroidal anti-inflammatory drugs.
- **Ciprofloxacin** can cause neurological adverse effects among adults with reduced renal function, and it can promote a higher risk for tendon rupture among these patients.