

Potentially Inappropriate Medication (PIM) in Older Adults

Drugs to Avoid	Drug Class	Concerns	Possible Alternatives*
Propoxyphene (Darvon [®] , Darvocet [®])	Opioid Analgesic	Offers no clinical advantage over acetaminophen (APAP) alone with greater potential for adverse effects ^{1,2,3} ; may increase risk for fall and hip fractures. ⁴	Mild Pain: acetaminophen, NSAIDs (short-term use)** Moderate-Severe Pain: hydrocodone/APAP (Vicodin [®]), morphine (MS Contin [®]), oxycodone (OxyContin [®]) oxycodone/APAP (Percocet [®]); transdermal or buccal fentanyl (Duragesic [®] , Actiq [®] , Fentora [®]) Topicals (neuropathic pain, arthritis): lidocaine (Lidoderm [®]), capsaicin (Zostrix [®])
Hydroxyzine (Vistaril [®] , Atarax [®])	1st Generation Antihistamines	Can cause anticholinergic adverse effects (dry mouth, urinary retention, constipation, blurred vision, confusion), cognitive impairment, excessive sedation, drowsiness, weakness, hypotension, and falls. ^{5,6,7} Trimethobenzamide: less effective than other antiemetics and may cause extrapyramidal adverse effects, confusion. ⁸	Allergy Symptoms: low-anticholinergic affinity antihistamines, e.g., loratadine (Claritin [®]), cetirizine (Zyrtec [®]), levocetirizine (Xyzal [®]) Mild Itching/Rash: topical diphenhydramine (Benadryl [®] cream), topical corticosteroids Cough: dextromethorphan (Robitussin [®] DM, etc.) Insomnia: zaleplon (Sonata [®]), ramelteon (Rozerem [®]), or eszopiclone (Lunesta [®]); short-acting benzodiazepine, e.g., estazolam (ProSom TM) Nausea/Vomiting: ondansetron (Zofran [®]), granisetron (Kytril [®]), dolasetron (Anzemet [®]), short-term use of prochlorperazine (Compazine [®])
Cyproheptadine (Periactin [®])			
Promethazine (Phenergan [®])			
Trimethobenzamide (Tigan [®])			
Others: Dexchlorpheniramine; Diphenhydramine			
Cyclobenzaprine (Flexeril [®] , Amrix [®] , Fexmid [®])	Skeletal Muscle Relaxants	Can cause anticholinergic adverse effects, dizziness, sedation, orthostatic hypotension, and weakness. ^{6,7} Questionable efficacy. ^{8,9}	Muscle Spasticity: low-dose baclofen or tizanidine (Zanaflex [®]); botulinum toxin injection ¹² Muscle/Back/Nerve Pain: use nondrug therapies; tizanidine, topical capsaicin (Zostrix [®]); lidocaine (Lidoderm [®]); or small amounts of topical menthol/methyl salicylate (BenGay [®] , Icy Hot [®])
Metaxalone (Skelaxin [®])			
Carisoprodol (Soma [®])			
Others: Methocarbamol (Robaxin [®]); Chlorzoxazone (Paraflex [®]); Orphenadrine (Norflex [®])			
Atropine (Lomotil [®] , Lonox [®] , Donnatal [®])	Gastrointestinal Antispasmodics (includes combinations)	Highly anticholinergic ⁶ ; may impair memory and cognitive functioning ⁷ ; questionable efficacy in the elderly.	Intestinal Spasms: assess for and avoid GI irritants, make dietary modifications, reduce stress Irritable Bowel Syndrome (pain/gas/bloating predominant): make dietary and lifestyle changes; citalopram (Celexa [®]), paroxetine (Paxil [®]) ¹³ , low-dose desipramine (Norpramin [®]); constipation predominant: lubiprostone (Amitiza [®]) Diarrhea: loperamide (Imodium [®]) Constipation: dietary modifications, psyllium (Metamucil [®] , etc.), polyethylene glycol (MiraLAX [®])
Dicyclomine (Bentyl [®])			
Hyoscyamine (Levsin [®] , Levbid [®] , NuLev [®] , Donnatal [®])			
Scopolamine (Transderm Scop [®])			
Propantheline (Pro-Banthen [®])			

Medications included account for approximately 75% of the PIMs for New Jersey Medicare Part D participants based on Healthcare Quality Strategies, Inc.'s (HQSI's) analysis of Medicare Part D claims obtained from the Iowa Foundation for Medical Care.

PIMs are medications that should generally be avoided in the elderly because the risks associated with their use may outweigh the benefits. The list is not intended as an absolute prohibition against prescribing these medications. Older adults are generally more sensitive to drugs with central nervous system (CNS) and/or anticholinergic side effects. Side effects may develop in those who have previously tolerated therapy.

*Possible alternatives are not meant as an exhaustive list. Formularies vary. Check with drug plan to ensure coverage. Use caution when initiating/discontinuing medications. Appropriate tapering recommended.

**New guidelines for chronic pain management in the elderly do not recommend NSAIDs or COX-2 inhibitors for the treatment of persistent pain for patients over 75 years of age. The guidelines will be published in the August 2009 issue of the *Journal of the American Geriatrics Society*.

Note: This document is intended for educational purposes only as a general guide to identify drugs that might be inappropriate and is not intended to override a clinician's judgment in individual patient management. Prescribing decisions are complex and must be based on an individual's full clinical picture.

References

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