Portland State University Institute on Aging

Alternatives for Beers Criteria High-Risk Medications in Older Adults

Oregon Health Authority

Building Partnerships for Older Adult Behavioral Health

Therapeutic Class	High-Risk Medications	Alternatives
Anticholinergic		
First-generation antihistamine	Clemastine Cyproheptadine (oral) Doxylamine Hydroxyzine Promethazine Triprolidine	Intranasal normal saline Second-generation antihistamine (e.g., cetirizine, fexofenadine, loratadine) Intranasal steroid (e.g., beclomethasone, fluticasone, over the counter)
Parkinson disease	Benztropine (oral) Trihexyphenidyl	Carbidopa/levodopa
Antiplatelets	Dipyridamole (oral immediate release) Ticlopidine	Antithrombotic therapy for the secondary prevention of noncardioembolic stroke Clopidogrel, aspirin 25 mg with extended-release dipyridamole 200 mg
Cardiovascular		
Alpha agonists, central	Guanabenz Guanfacine Methyldopa	Thiazide-type diuretic, ACEI, ARB, long-acting dihydropyridine CCB In black individuals—thiazide-type diuretic, CCB For heart failure, diabetes mellitus, chronic kidney disease—ACEI or ARB preferred
Other	Disopyramide	Atrial fibrillation: For rate control—nondihydropyridine CCB (e.g., diltiazem), betablocker For rhythm control—dofetilide flecainide, propafenone
	Nifedipine (immediate release)	Long-acting dihydropyridine CCB (e.g., amlodipine)
Central nervous system		
Tertiary tricyclic antidepressant	Amitriptyline Clomipramine Imipramine Trimipramine	For depression—SSRI (except paroxetine), SNRI, bupropion– see reverse side of this resource For neuropathic pain—SNRI, gabapentin, capsaicin topical, pregabalin, lidocaine patch
Barbiturate	Amobarbital Butabarbital Butalbital Mephobarbital Pentobarbital Phenobarbital Secobarbital	For epilepsy—other anticonvulsants (e.g., lamotrigine, levetiracetam)
Vasodilator	Ergot mesylates Isoxsuprine	Acetylcholinesterase inhibitors, memantine, Vitamin E
Central nervous system, nonbenzodiazepine hypnotics	Eszopiclone Zaleplon Zolpidem	Nonpharmacologic evidence-based practices and therapies—see reverse side of this resource

Therapeutic Class	High-Risk Medications	Alternatives
Central nervous system (cont.)		
Other	Thioridazine	For schizophrenia—other nonanticholinergic antipsychotic (not chlorpromazine, loxapine, olanzapine, perphenazine, thioridazine, trifluoperazine)
Other	Meprobamate Chloral hydrate (no longer marketed in United States)	For anxiety—buspirone, SSRI, SNRI
Endocrine system		
Estrogens with or without progestins (oral or patch)	Conjugated estrogen Esterified estrogen Estradiol Estropipate	Use of vaginal estrogen formulations acceptable for treatment of dyspareunia and vulvovaginitis Vasomotor symptoms—SSRI, SNRI, gabapentin
Sulfonylureas, long-duration	Guanabenz Guanfacine Methyldopa	Short-acting sulfonylureas (glipizide, gliclazide), metformin
Other	Desiccated thyroid	Levothyroxine
	Megestrol	Nonpharmacologic evidence-based practices and therapies—see reverse side of this resource
Pain medication		
Skeletal muscle relaxants	Carisoprodol Chlorzoxazone Cyclobenzaprine Metaxalone Methocarbamol Orphenadrine	For acute mild or moderate pain—acetaminophen, nonacetylated salicylate (e.g., salsalate), propionic acid derivatives (e.g., ibuprofen, naproxen) if no heart failure or eGFR>30 mL/min and given with PPI for gastroprotection if used for >7 days
Specific nonsteroidal antiinflammatory drugs	Indomethacin, Ketorolac (oral and parenteral)	For mild or moderate chronic pain—acetaminophen, nonacetylated salicylate (e.g., salsalate), propionic acid derivatives (e.g., ibuprofen, naproxen) if no heart failure or eGFR >30 mL/min and given with PPI for gastroprotection
Opioids	Meperidine Pentazocine	For acute moderate to severe pain—tramadol, morphine, oxycodone immediate release with acetaminophen For chronic moderate to severe pain—all the above; avoid long duration, sustained-release dosage forms in opioid-naïve individuals; see neuropathic pain alternatives above under tertiary tricyclic antidepressant alternatives

ACEI = angiotensin-converting enzyme inhibitor; ARB = angiotensin receptor blocker; eGFR = estimated glomerular filtration rate; CCB = calcium channel blocker; PPI = proton pump inhibitor; SSRI = selective serotonin reuptake inhibitor; SNRI = serotonin norepinephrine reuptake inhibitor. In all instances including those specified, nonpharmacological approaches should be sought first when appropriate. See reverse side for references.

Adapted from Hanlon, J. Semla, T., & Shmader, K. (2015) Alternative Medications for Medications in the Use of High-Risk Medications in the Elderly and Potentially Harmful Drug-Disease Interactions in the elderly Quality Measures. Journal of the American Geriatrics Society.

Portland State UNIVERSITY
Institute on Aging

Alternatives to Beers Criteria Potentially Harmful Drug-Disease Interactions in Older Adults

Disease	Potentially Harmful Drugs	Alternatives
Falls	Anticonvulsants	For new-onset epilepsy—newer agents preferred (e.g., lamotrigine, levetiracetam and calcium/vitamin D bisphosphonate) For neuropathic pain—SNRI, gabapentin, pregabalin, capsaicin topical, lidocaine patch
	Benzodiazepines Nonbenzodiazepine hypnotics ("Z" drugs: eszopiclone, zaleplon, zolpidem)	For anxiety—buspirone, SNRI For sleep—evidence-based physiological behavioral treatments for insomnia, see reverse side of this resource
	Tricyclic antidepressants (tertiary and secondary) SSRIs	For depression—e.g., SNRI, bupropion For neuropathic pain—SNRI, gabapentin, pregabalin, capsaicin topical, lidocaine patch
	Antipsychotics	For delirium—short-term use of antipsychotics (e.g., haloperidol, quetiapine) should be restricted to individuals who are distressed or considered a risk to themselves or others and in whom verbal and nonverbal de-escalation techniques are ineffective or inappropriate For schizophrenia—nonanticholinergic agents may be acceptable (not chlorpromazine, loxapine, olanzapine, perphenazine, trifluoperazine, thioridazine) For behavioral complications of dementia—if nonpharmacological approaches have failed and psychosis and danger to self or others, lowdose nonanticholinergic agent (e.g., risperidone, quetiapine) for shortest duration possible may be acceptable
Dementia	Tricyclic antidepressants (tertiary and secondary)	For depression—SSRI, SNRI, bupropion For neuropathic pain—SNRI, capsaicin topical, gabapentin, pregabalin, lidocaine patch
	Antipsychotics	For behavioral complications of dementia—if nonpharmacological approaches have failed, and psychosis and danger to self or others, low-dose nonanticholinergic agent (e.g., risperidone, quetiapine) for shortest duration possible may be acceptable
	H2 blockers	Proton pump inhibitor
	Anticholinergics (see table 7 in 2015 AGS Beers criteria for complete list of classes) (e.g., first generation antihistamines, and anti-Parkinson agents)	For allergy—second-generation antihistamine, nasal steroid For Parkinson disease—levodopa with carbidopa
	Benzodiazepines	For anxiety—buspirone, SNRI For sleep—evidence-based physiological behavioral treatments for insomnia, see reverse side of this resource
	Nonbenzodiazepine hypnotics ("Z" drugs)	Evidence-based physiological behavioral treatments for insomnia, see reverse side of this resource
Chronic kidney disease or chronic renal failure (eGFR <30 mL/min)	All nonaspirin nonsteroidal antiinflammatories (including cyclooxygenase-2 selectives)	For pain—acetaminophen, SNRI, topical capsaicin lidocaine patch

eGFR = estimated glomerular filtration rate; SSRI = selective serotonin reuptake inhibitor; SNRI = serotonin norepinephrine reuptake inhibitor.
In all instances including those specified, nonpharmacological approaches should be sought first when appropriate— see reverse side of this resource.
Falls recommendations also include noncancer, nontrauma hip fracture. If agent must be used, consider reducing the use of other central nervous system–active medications that increase the risk of falls and fractures (anticonvulsants, antipsychotics, antidepressants, benzodiazepine receptor agonists).

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