

Online Supplementary eTable¹**eTable 1.** Risk medications/classes potentially associated with inappropriate use in elderly adults in the Chinese criteria.

Medication Class	Drugs	Risk Level
Psychotropic medications	Fuoxetine	Low
	Risperidone	Low
	Olanzapine	Low
	Quetiapine	Low
	Amitriptyline	High
	Chlorpromazine	High
	Doxepin	High
	Maprotiline	High
	Clozapine	High
	Perphenazine	Low
	Fluphenazine	Low
	Haloperidol	Low
	Aripiprazole	Low
	Fluvoxamine	Low
	Sulpiride	Low
Skeletal muscular relaxants	Baclofen	Low
	Chlorzoxazone	Low
Endocrine system drugs	Insulin (sliding scale)	Low
	Growth hormone	High
	Glibenclamide	Low
	Megestrol	Low
Respiratory system medications	Aminophylline	Low
Cardiovascular system medications	Clonidine	High
	Procainamide	High
	Nifedipine (regular release)	Low
	Reserpine (> 0.1mg/d, Jiangya No.0 and compound reserpine tablets, etc.)	High
	Doxazosin	High
	Digoxin (> 0.125 mg / d)	Low
	Amiodarone	Low
Antimicrobial medications	Gatifloxacin	Low
	Aminoglycoside antibiotics	Low
	Vancomycin	Low
	Clindamycin	Low
Antiallergic medicines	Chlorphenamine	Low
	Promethazine	Low
	Diphenhydramine	Low
Urinary system medications	Spirolactone (> 25mg / d)	Low
	Tolterodine	Low
Digestive system medications	Anisodamine	High
	Belladonna alkaloids	High

¹ Rational Drug Use Branch of Chinese Association of Geriatric Research, Geriatrics Branch of Chinese Medical Association, Geriatric Medication Committee of Chinese Pharmaceutical Association, et al. Criteria of PIM for Older Adults in China. *Adverse Drug Reactions Journal* 2018;20:2-8 (in Chinese).

Central nervous system medications	Cimetidine	Low
	Lorazepam	High
	Alprazolam	High
	Benhexol	High
	Dihydroergot	Low
	Estazolam	Low
	Nicergoline	Low
	Zolpidem	Low
	Clozapine	High
	Nitrazepam	High
	Barbiturates (except phenobarbital)	High
	Phenobarbital	High
	Clonazepam	High
	Diazepam	High
	Phenytoin	High
Pentoxifylline	Low	
Hematological medications	Warfarin	Low
	Clopidogrel	Low
	Ticlopidine	High
Antipyretics, analgesics and anti-inflammatory medications	Nabumetone	High
	Diclofenac	Low
	Ibuprofen	Low
	Indometacin	High
	Combination of ≥ 2 NSAIDs	High
	Phenylbutazone	High
	Piroxicam	High
	Naproxen	High
	Ketoprofen	Low
	Etoricoxib	Low
Anesthetics	Pethidine	High
	Morphine, morphine sustained release tablets	Low
	Tramadol	Low

eTable 2. Medication/class-disease pairs potentially associated with inappropriate use in elderly adults with certain disease conditions in the Chinese criteria.

Medication Class	Morbid State	Drugs	Recommendation
Central nervous system medications	Epilepsy or seizure	Antipsychotics	Use with caution
		Thioridazine	Avoid
		Bupropion	Avoid
		Maprotiline	Avoid
	Delirium	Benzodiazepines	Avoid for those with high risk of delirium, and stop the drug slowly
		Chlorpromazine	
		Tricyclic antidepressants	
		Glucocorticoid	
		Anticholinergic drugs	Thioridazine
	Dementia or cognitive impairment	Benzodiazepines	Avoid
	Insomnia	Norepinephrine	Avoid
		Pimolin	Avoid
		Triazolam	Use non drug treatment, if drug treatment is necessary, choose benzodiazepines with short half-life
	Parkinson's disease	Antipsychotics	Avoid
		Metoclopramide	Avoid
Promethazine		Avoid	
Haloperidol		Use with caution	
Cognitive impairment	Anticholinergic drugs	Avoid	
Depression	Reserpine	Use with caution	
Prevention of stroke	Dipyridamole	Switch to aspirin or ticlopidine	
Cardiovascular system medications	Heart failure	NSAIDs	Avoid
		Diltiazem	Avoid
		Verapamil	Avoid
		Pioglitazone	Avoid
		Rosiglitazone	Avoid
		Cilostazol	Avoid
	Syncope	Chlorpromazine	Avoid
		Olanzapine	Avoid
		Doxazosin	Avoid
		Terazosin	Avoid
		Cholinesterase inhibitors	Avoid
	Thioridazine	Use with caution	
	Postural hypotension	Chlorpromazine	Switch to powerful antipsychotics such as haloperidol, and

			continuously monitor blood pressure	
	Hypertension	NSAIDs	Switch to acetaminophen or aspirin and monitor blood pressure closely	
		Reserpine	Switch to other antihypertensive drugs	
	Coagulation disorder or anticoagulant treatment	Ticlopidine	Use with caution	
		Clopidogrel	Use with caution	
		NSAIDs	Use non drug treatment, or switch to acetaminophen, combined with gastric mucosal protective agent	
Urinary system medications	Renal insufficiency	NSAIDs	Avoid	
	Chronic nephrosis iv/v	Aminopterdine	Avoid	
	Urinary incontinence	Estrogen (except vaginal discharge)		Avoid in women
		Doxazosin		Avoid in women
		Prazosin		Avoid in women
		Terazosin		Avoid in women
Symptoms of lower urinary tract and prostatic hyperplasia	Anticholinergic drugs		Avoid in women	
Digestive system medications	Peptic ulcer	NSAIDs	Avoid long-term use, only when the efficacy of other drugs is poor and taking gastric mucosal protective agent at the same time	
		Glucocorticoid	Use with caution	
	Chronic constipation	Antipsychotics		Avoid, unless no other alternatives
		Tricyclic antidepressants		Avoid, unless no other alternatives
		Amitriptyline bromide		Avoid, unless no other alternatives
		Tolterodine		Avoid, unless no other alternatives
		Anticholinergic drugs		Avoid, unless no other alternatives
		Chlorphenamine		Avoid, unless no other alternatives
		Clomastine		Avoid, unless no other alternatives
		Diphenhydramine		Short-tem use
		Cyproheptadine		Short-tem use
		Oxybutynin (oral)		Avoid, unless no other alternatives

Respiratory system medications	Chronic obstructive pulmonary disease (History)	Benzodiazepines	Use with caution
	Sleep apnea syndrome	Benzodiazepines	Use with caution
Endocrine system drugs	Osteoporosis	Glucocorticoid	Use with caution
	Diabetes	Glucocorticoids (long-term use)	Use inhaled corticosteroids, and monitor blood glucose closely
Other	History of falls or fractures	Benzodiazepines	Avoid, unless no other alternatives
		Zaleplon	Avoid, unless no other alternatives
		Antipsychotics	Avoid
		Tricyclic antidepressants	Use with caution
	Glaucoma	Tricyclic antidepressants	Switching to selective serotonin reuptake inhibitors
		Anticholinergic drugs	Use with caution
	Pain	Pethidine (long-term use)	Non drug treatment, if drug treatment is necessary, switch to paracetamol or codeine and morphine
	Gout	Thiazide diuretics	Switch to other antihypertensive drugs
		Eszopiclone	Avoid, unless no other safer alternatives