

# CMS: High-Risk Medications

Updated January 2015

Drug classification	High-risk agents to Avoid (H) = considered Highest-risk <sup>1</sup>	Reason for risk	Non-high risk alternatives	
			Drug	Tier
<b>Amphetamines</b>	<ul style="list-style-type: none"> <li>amphetamine &amp; dextroamphetamine (H) (<i>ADDERALL/XR</i>)</li> <li>benzphetamine (H) (<i>DIDREX</i>)</li> <li>dexmethylphenidate (H) (<i>FOCALIN/XR</i>)</li> <li>dextroamphetamine (H) (<i>DEXADRINE</i>, <i>DEXTROSTAT</i>)</li> <li>diethylpropion (H) (<i>DURAD</i>, <i>TENUATE</i>, <i>TEPANIL</i>)</li> <li><i>INTUNIV</i> (H)</li> <li>methamphetamine (H) (<i>DESOXYM</i>)</li> <li>methylphenidate (H) (<i>RITALIN/LA</i>, <i>CONCERTA</i>, <i>DAYTRANA</i>, <i>METADATE CD</i>)</li> <li>phendimetrazine (H) (<i>BONTRIL</i>)</li> <li>phentermine (H) (<i>ADIPEX-P</i>)</li> </ul>	CNS stimulation: agitation, insomnia; hypertension, myocardial ischemia; dependence; appetite suppression	Consider discontinuing	NA
<b>Analgesics</b>	<ul style="list-style-type: none"> <li>indomethacin (<i>INDOCIN</i>)</li> <li>ketorolac (H) (<i>TORADOL</i>)</li> </ul>	<p>Ketorolac: Gastrointestinal bleeding risk increased in elderly.</p> <p>Indomethacin: GI bleeding/peptic ulcer in high-risk patients.<sup>a</sup> Has more adverse effects than other NSAIDs. Edema may worsen heart failure.</p>	<p><u>mild pain:</u>  <i>APAP</i>  <i>ibuprofen</i>  <i>naproxen</i>  <i>meloxicam</i></p> <p><u>moderate/severe pain:</u>  <i>tramadol</i>  <i>morphine sulfate (MS CONTIN)</i>  <i>hydrocodone/APAP (VICODIN, etc)</i>  <i>oxycodone (OXYIR)</i>  <i>oxycodone/APAP (PERCOCET)</i>  <i>fentanyl patch (DURAGESIC)</i>  <i>OXYCONTIN</i>  <i>AVINZA</i></p>	<p>Not covered</p> <p>T1 T1 T1</p> <p>T2 T2 T2 T2 T2 T5/T5 T5 (ST)</p>
<b>Anti-adrenergics</b>	<ul style="list-style-type: none"> <li>guanabenz</li> <li>guanfacine (<i>TENEX</i>)</li> <li>methyldopa (<i>ALDOMET</i>)</li> <li>methyldopa/HCTZ (<i>ALCOLOR</i>, <i>ALDORIL</i>)</li> </ul>	Orthostatic hypotension, bradycardia, CNS adverse effects	HCTZ lisinopril enalapril losartan metoprolol	T1 T1 T1 T1 T1

T1: Tier 1

T5: Tier 2

T5: Tier 3

NA: Not Applicable

ST: Step Therapy

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<b>Anti-anxiety</b>	<ul style="list-style-type: none"> <li>meprobamate (H) (<i>EQUINIL</i>)</li> <li>aspirin/meprobamate (H) (<i>EQUAGESIC</i>)</li> </ul>	Dependence; sedation; depression; confusion; falls; fractures; respiratory depression (especially in COPD)	<u>anxiety:</u> <i>buspirone (BUSPAR)</i>  <u>sleep:</u> <i>ROZEREM</i>	T2  T5
<b>Anti-emetics</b>	<ul style="list-style-type: none"> <li>trimethobenzamide (H) (<i>TIGAN</i>)</li> <li>promethazine (H) (<i>PHENERGAN</i>)</li> </ul>	Anticholinergic side effects: worsened cognition & behavioral problems (especially in dementia); urinary retention OR incontinence; questionable efficacy	<i>TRANSDERM-SCOP</i> <i>ondansetron (ZOFTRAN)</i> <i>granisetron (KYTRIL)</i> <i>prochlorperazine (COMPAZINE)</i> <i>metoclopramide (REGLAN)*</i> *avoid using long-term and/or in Parkinson's disease	T5 T2 (B/D) T2 (B/D) T2 T1 (B/D)
<b>Antihistamines</b>  APAP= acetaminophen  PSE= pseudoephedrine	<ul style="list-style-type: none"> <li>APAP/dextromethorphan/diphenhydramine (H)</li> <li>APAP/diphenhydramine/phenylephrine (H)</li> <li>APAP/diphenhydramine/PSE (H)</li> <li>APAP &amp; diphenhydramine (H)</li> <li>Brompheniramine / combination products (H)</li> <li>carbetapentane/diphenhydramine/phenylephrine (H)</li> <li>carbinoxamine / combination products (H)</li> <li>chlorpheniramine / combination products (H)</li> <li>clemastine (H)</li> <li>codeine/promethazine/phenylephrine (H)</li> <li>codeine &amp; promethazine (H)</li> <li>cypheptadine (H)</li> <li>dexbrompheniramine-Pyrilamine (H)</li> <li>dexchlorpheniramine</li> <li>dexchlorpheniramine/dextromethorphan/PS E (H)</li> <li>dexchlorpheniramine/guaifenesin/PSE (H)</li> <li>dexchlorpheniramine/hydrocodone/phenylephrine (H)</li> <li>dexchlorpheniramine/methscopolamine/PSE (H)</li> <li>dexchlorpheniramine &amp; PSE (H)</li> </ul>	Anticholinergic side effects: worsened cognition & behavioral problems (especially in dementia); urinary retention OR incontinence; confusion; enhanced sedation;	<i>Levocetirizine (XYZAL)</i> <i>CLARINEX</i>	T2 T5 with ST

	<ul style="list-style-type: none"> <li>dextromethorphan &amp; promethazine (H)</li> <li>diphenhydramine (H)</li> <li>diphenhydramine/hydrocodone/phenylephrine (H)</li> <li>diphenhydramine &amp; phenylephrine (H)</li> <li>diphenhydramine &amp; PSE (H)</li> <li>diphenhydramine &amp; magnesium salicylate (H)</li> <li>doxylamine</li> <li>hydroxyzine hydrochloride (H)</li> <li>hydroxyzine pamoate (H)</li> <li>phenylephrine &amp; promethazine (H)</li> <li>promethazine (H)</li> <li>triprolidine</li> </ul> <p><b>Note:</b> Various brand name drugs apply.</p>			
<b>Antiparkinson/antipsychotics</b>	<ul style="list-style-type: none"> <li>benztropine (<i>COGENTIN</i>)</li> <li>trihexyphenidyl</li> </ul>	Delirium, worsen cognitive impairment, worsen constipation, worsen urinary retention; not recommended to prevent antipsychotic-associated extrapyramidal effects; not very effective for Parkinson's disease	Consider discontinuing or using atypical antipsychotic	NA
<b>Antipsychotics</b>	<ul style="list-style-type: none"> <li>thioridazine (H) (<i>MELLARIL</i>)</li> </ul>	CNS side effects; seizure risk; extrapyramidal effects: tremor, slurred speech, muscular rigidity, dystonia (involuntary muscle contractions), bradykinesia (slowing of movement), akathisia (inability to sit/stand still)	<i>haloperidol (HALDOL)</i> <i>risperidone (RISPERDAL)*</i> ABILIFY* FANAPT* GEODON* INVEGA* SEROQUEL* ZYPREXA*  *atypical antipsychotics associated w/ increased mortality when used to treat behavioral issues in elderly w/ dementia	T2 T2 T5 T5 (ST) T5 T5 (ST) T5 T5
<b>Barbiturates</b>	<ul style="list-style-type: none"> <li>butabarbital (H) (<i>BUTISOL</i>)</li> <li>butalbital / combinations (H) (<i>FIORICET, FIORINAL, DOLGIC, ESGIC</i>)</li> <li>mephobarbital (H) (<i>MEBARAL</i>)</li> <li>pentobarbital (H) (<i>NEMBUTAL</i>)</li> </ul>	Higher risk of side effects: falls; fractures; confusion; cognitive impairment; dependence	<u>sleep:</u> ROZEREM  <u>mild pain:</u> APAP ibuprofen	T5  Not covered T1

T1: Tier 1

T5: Tier 2

T5: Tier 3

NA: Not Applicable

ST: Step Therapy

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	<ul style="list-style-type: none"> <li>phenobarbital (H) (<i>LUMINAL</i>)</li> <li>secobarbital (H) (<i>SECONAL</i>)</li> </ul>		<i>naproxen</i> <i>meloxicam</i>  <u>moderate/severe pain:</u> <i>tramadol</i> <i>morphine sulfate (MS CONTIN)</i> <i>hydrocodone/APAP (VICODIN, etc)</i> <i>oxycodone (OXYIR)</i> <i>oxycodone/APAP (PERCOCET)</i> <i>fentanyl patch (DURAGESIC)</i> <i>OXYCONTIN</i> <i>AVINZA</i>	T1 T1  T2 T2 T2 T2 T2 T5/T5 T5 (ST)
<b>Belladonna alkaloids</b>  CPM= chlorpheniramine  PE=phenylephrine	<ul style="list-style-type: none"> <li>atropine/hyoscyamine/phenobarbital/scopolamine (H) (<i>BELLADONNA ALKALOIDS, DONNATAL, ANTISPASMODIC ELIXIR</i>)</li> <li>atropine &amp; edrophonium (<i>ENLON</i>)</li> <li>belladonna (H)</li> <li>belladonna/ergotamine/phenobarbital (H) (<i>BELLAMINE</i>)</li> <li>butabarbital/hyoscyamine/phenazopyridine (H) (<i>PHENAZOPYRIDEINE PLUS, PHENAZOFORTE PLUS</i>)</li> <li>digestive-enzymes/hyoscyamine/phenyltoloxamine (H) (<i>DIGEX NF</i>)</li> </ul>	Anticholinergic AEs: worsened cognition & behavioral problems (especially in dementia); urine retention; agitation & delirium	<u>constipation:</u> <i>psyllium fiber (METAMUCIL)</i> <i>polyethylene glycol (MIRALAX)</i> <i>docusate</i>  <u>diarrhea:</u> <i>loperamide (IMODIUM)</i> <i>aluminum hydroxide</i> <i>atropine &amp; difenoxin (MOTOFEN)</i> <i>atropine &amp; diphenoxylate (LOMOTIL, LONOX, LOGEN, LOMANATE)</i>	Not covered Not covered Not covered  T2 Not covered T2 T2
<b>Benzodiazepines (long-acting)</b>	<ul style="list-style-type: none"> <li>amitriptyline &amp; chlordiazepoxide (H) (<i>LIMBITROL DS</i>)</li> </ul>	Dependence; depression; prolonged sedation; confusion; falls; fractures; respiratory depression (especially in COPD); accumulation of drug	<i>buspirone (BUSPAR)</i> <i>chlordiazepoxide (H) (LIBRIUM)</i> <i>diazepam (VALIUM)</i> <i>flurazepam (DALMANE)</i>	T2 T2 T2 T2
<b>Calcium channel blockers</b>	<ul style="list-style-type: none"> <li>nifedipine (short-acting immediate release only) (H) (<i>ADALAT CC, PROCARDIA</i>)</li> </ul>	Hypotension; constipation	<i>nifedipine ER (PROCARDIAXL)</i>	T2
<b>Cardiac glycosides</b>	<ul style="list-style-type: none"> <li>digoxin (<i>LANOXIN, DIGITEK, LANOXICAPS</i>)</li> </ul>	No additional efficacy vs lower doses; toxicity due to reduced renal clearance	Consider discontinuing or dose reduction (e.g. 0.125mg) with monitoring	NA
<b>Estrogens and progestins</b>	<b>Oral</b> <ul style="list-style-type: none"> <li><i>ANGELIQ</i></li> <li>conjugated estrogen (<i>PREMARIN, ESTINYL</i>)</li> <li>conjugated estrogen &amp; medroxyprogesterone</li> </ul>	Increased risk of breast &/or endometrial cancer; NOT cardioprotective	<u>Hot flashes*:</u> <i>venlafaxine (EFFEXOR)</i> <i>paroxetine (PAXIL)</i> <i>fluoxetine (PROZAC)</i> <i>sertraline (ZOLOFT)</i>	T2 T2 T1 T1

T1: Tier 1

T5: Tier 2

T5: Tier 3

NA: Not Applicable

ST: Step Therapy

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	<ul style="list-style-type: none"> <li>propoxyphene hydrochloride (<i>DARVOM</i>)</li> <li>propoxyphene napsylate (<i>DARVOM</i>)</li> </ul>		<i>oxycodone (OXYIR)</i> <i>oxycodone/APAP (PERCOCET)</i> <i>fentanyl patch (DURAGESIC)</i> <i>OXYCONTIN</i> <i>AVINZA</i>	T2 T2 T2 T5 T5 (ST)
<b>Oral hypoglycemics</b>	<ul style="list-style-type: none"> <li>chlorpropamide (H) (<i>DIABINESE, INSULASE</i>)</li> <li>glyburide (<i>DIABETA, MICRONASE, GLYCRON, GLYNASE</i>) (H)</li> <li>glyburide/metformin (<i>GLUCOVANCE</i>) (H)</li> </ul>	Prolonged hypoglycemia; risk of SIADH	<i>glimepiride (AMARYL)</i> <i>glipizide (GLUCOTROL)</i>	T1 T1
<b>Sedative hypnotics</b>	<ul style="list-style-type: none"> <li>chloral hydrate (<i>SOMNOTE</i>) (H)</li> <li><i>LUNESTA</i> (H)</li> <li>zaleplon (<i>SONATA</i>) (H)</li> <li>zolpidem (<i>AMBIEN/CR, INTERMEZZO, EDLUAR, ZOLPIMIST</i>) (H)</li> </ul>	Cognitive impairment, delirium, unsteady gait, syncope, falls, accidents, fractures, tolerance, delirium, risk of overdose (narrow therapeutic window – chloral hydrate)	<i>Temazepam</i> <i>Trazodone</i> <i>ROZEREM</i>  <i>Limit use of sedative hypnotic to short-term use</i>	T1 T1 T5
<b>Skeletal muscle relaxants</b>  ASA=aspirin	<ul style="list-style-type: none"> <li>ASA/cafeine/orphenadrine (H)</li> <li>ASA/carisoprodol/codeine (H)</li> <li>ASA &amp; carisoprodol (H)</li> <li>ASA &amp; methocarbamol (H)</li> <li>carisoprodol (H) (<i>SOMA</i>)</li> <li>chlorzoxazone (H) (<i>PARAFON FORTE</i>)</li> <li>cyclobenzaprine (H) (<i>FLEXERIL, AMRIX, FEXMID</i>)</li> <li>metaxalone (H) (<i>SKELAXIN</i>)</li> <li>methocarbamol (H) (<i>ROBAXIN</i>)</li> <li>orphenadrine (H) (<i>NORFLEX</i>)</li> </ul>	Anticholinergic side effects: worsened cognition & behavioral problems (especially in dementia); urinary retention OR incontinence; confusion sedation; weakness; questionable efficacy (at lower doses)	<i>baclofen (LIORESAL)</i> <i>tizanidine (ZANAFLEX)</i>	T2 T2
<b>Tricyclic antidepressants</b>	<ul style="list-style-type: none"> <li>amitriptyline/combinations (<i>ELAVIL, VANATRIP</i>) (H)</li> <li>clomipramine (<i>ANAFRANIL</i>) (H)</li> <li>doxepin (<i>SINEQUAN, SILENOR</i>) (H)</li> <li>imipramine (<i>TOFRANIL</i>) (H)</li> <li>Trimipramine (<i>SURMONTIL</i>) (H)</li> </ul>	Anticholinergic effects (e.g., confusion, dry mouth, constipation), cognitive impairment, delirium, sedation, orthostatic hypotension	<i>nortriptyline</i> <i>desipramine</i> <i>trazodone (low dose)</i>	T2 T2 T1
<b>Vasodilators</b>	<ul style="list-style-type: none"> <li>dipyridamole (short-acting only) (<i>PERSANTINE</i>)</li> <li>ergot mesyloid (<i>ERGOMAR</i>)</li> <li>isoxsuprine (<i>VASODILAN</i>)</li> </ul>	Orthostatic hypotension; ineffective for stroke prevention; unproven &/or questionable efficacy	<u>stroke prevention:</u> <i>aspirin</i> <i>PLAVIX</i> <i>AGGRENOX</i>  <u>Alzheimer's/dementia:</u>	Not covered T5 T5

T1: Tier 1

T5: Tier 2

T5: Tier 3

NA: Not Applicable

ST: Step Therapy

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			<i>galantamine</i> <i>rivastigmine</i> ARICEPT EXELON	T2 T2 T5 T5
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<b>Other</b>  (androgen, anabolic steroid; thyroid drug; urinary anti-infectives, psych, cardiac)	<ul style="list-style-type: none"> <li>• methyltestosterone (H) (<i>ANDROID, TESTRED</i>)</li> <li>• nitrofurantoin (H) (<i>FURADANTIN</i>)</li> <li>• nitrofurantoin macrocrystals (H) (<i>MACRODANTIN</i>)</li> <li>• nitrofurantoin macrocrystals-monohydrate (H) (<i>MACROBID</i>)</li> <li>• thyroid desiccated (H) (<i>ARMOUR THYROID</i>)</li> <li>• <i>SERENTIL</i> (H)</li> <li>• ergoloid (<i>HYDERDINE</i>) (H)</li> <li>• reserpine/combinations (H)</li> <li>• ticlopidine (<i>TICLID</i>) (H)</li> </ul>	Methyltestosterone = cardiac side effects & prostatic enlargement in men  Nitrofurantoin = nephrotoxicity (kidney)  Thyroid desiccated = cardiac AEs	NA  <u>urinary tract infections</u> <i>ciprofloxacin</i> <i>trimethoprim-sulfamethoxazole</i> ( <i>BACTRIM DS</i> )  <u>thyroid:</u> <i>levothyroxine</i> ( <i>SYNTHROID</i> ) <i>levoxyl</i>  <u>anti-platelet</u> <i>clopidogrel</i>	NA  T2 T2  T1 T2  T2
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#### References

1. Fick DM, Cooper JW, Wade WE, Waller JL, Maclean JR, Beers MH. Updating the beers criteria for potentially inappropriate medication use in older adults. *Arch Intern Med.* 2003; 163(22): 2716-24.
2. Simon SR, Chan A, Soumerai SB, Wagner AK, Andrade SE, Feldstein AC, et al. Potentially inappropriate medication use by elderly persons in U.S. health maintenance organizations, 2000-2001. *J Am Geriatr Soc.* 2005; 53(2): 227-32.
3. Chang CM, Liu PY, Yang YK, Yang YC, Wu C, Lu F. Use of the beers criteria to predict adverse drug reactions among first-visit elderly outpatients. *Pharmacotherapy.* 2005; 25(6): 831-38.
4. PL Detail-Document, Potentially Harmful Drugs in the Elderly: Beers List. Pharmacist's Letter/Prescriber's Letter. June 2012.

Specifications from Pharmacy Quality Alliance apply to certain drugs for a calculation of cumulative days supply and average dose:

- A. For nitrofurantoin, a patient is included in the numerator if he/she received at least two prescription fills for the medication and if the cumulative days supply for any nitrofurantoin product is greater than 90 days during the measurement period.
- B. For reserpine, a patient is included in the numerator if he/she received at least two prescription fills for the medication and if the average daily dose is greater than 0.1mg.
- C. For digoxin, a patient is included in the numerator if he/she received at least two prescription fills for the medication and if the average daily dose is greater than 0.125mg.
- D. For doxepin, a patient is included in the numerator if he/she received at least two prescription fills for the medication and if the average daily dose is greater than 6mg.
- E. The cumulative calculation applies to the class of nonbenzodiazepine hypnotics and not for each individual medication. A patient is included in the numerator if he/she received at least two prescription fills for any medication in the class and if the cumulative days supply for any product is greater than 90 days during the measurement period. For example, if a patient received a 30 day supply of zolpidem, a second fill for 30 days supply of zolpidem and then a fill for 35 days supply eszopiclone (all during the measurement period), this would qualify for inclusion in the numerator.