

Appendix 2 – Canadian guidelines on inappropriate prescribing practice for elderly people (Macleod et al, 1997):

Inappropriate prescribing practices in treating cardiovascular disease

Practice	Mean clinical significance rating (from 1 – not significant, to 4 – highly significant)	Risk to patient	Alternative therapy	% of panel members who agreed with alternative
Prescription of β -adrenergic blocking agent to treat hypertension for patients with a history of asthma or COPD	3.83	May exacerbate respiratory disease	Another class of antihypertensive drugs	94
Prescription of β -adrenergic blocking agent to treat angina for patients with a history of asthma, COPD, or heart failure	3.63	May exacerbate respiratory disease or heart failure	Nitrate or calcium-channel blocker	94
Prescription of reserpine to treat hypertension	3.14	May cause depression and extrapyramidal effects in high dosages	Another antihypertensive drug	76
Prescription of disopyramide to treat atrial fibrillation	3.09	May cause anticholinergic side effects and sudden cardiac death	Digoxin Quinidine Pyrocainamide	59 31 25
Prescription of thiazide diuretic to treat hypertension for patients with a history of gout	3.07	May precipitate or worsen gout	Another antihypertensive drug	74
Prescription of calcium-channel blocker to treat hypertension for patients with a history of heart failure	3.06	May worsen heart failure	Diuretic or ACE inhibitor or both	94
Prescription of β -adrenergic blocking agent to treat hypertension for patients with a history of heart failure	3.00	May worsen heart failure	Diuretic or ACE inhibitor Lower dosage of β -adrenergic blocking agent and monitor effects	78 44
Long-term prescription of β -adrenergic blocking agent to treat angina or hypertension for patients with a history of Raynaud disease	3.00	May worsen Raynaud disease	Calcium-channel blocker	91

Inappropriate practices in prescribing psychotropic drugs for elderly people

Practice	Mean clinical significance rating (1 to 4)	Risk to patient	Alternative therapy	% of panel members who agreed with alternative
Long-term prescription of long half-life benzodiazepine to treat insomnia	3.72	May cause falls, fractures, confusion, dependence, and withdrawal	Nondrug therapy or short half-life benzodiazepine	97
Prescription of tricyclic antidepressant to treat depression for patients with a history of glaucoma, BPH, or heart block	3.63	May aggravate glaucoma, cause urinary retention in patients with BPH or worsen heart block	SSRI	94
Long-term prescription of barbiturate to treat insomnia	3.59	May cause falls, fractures, confusion, dependence, and withdrawal	Nondrug therapy or low dosage of short half-life benzodiazepine	94
Prescription of SSRI for patients already receiving an MAO inhibitor to treat depression	3.56	May extend adverse effects of SSRI	Avoid combining; ensure a wash-out period of at least 7 days if switching from an MAO inhibitor to an SSRI	81
Long-term prescription of long half-life benzodiazepine to treat anxiety	3.55	May cause falls, fractures, confusion, dependence, and withdrawal	Nondrug therapy or short half-life benzodiazepine	88
Long-term prescription of long half-life benzodiazepine to treat agitation in dementia	3.52	May cause falls, fractures, confusion, dependence, and withdrawal	Loxapine or haloperidol Short half-life benzodiazepine	88 56
Prescription of tricyclic antidepressant to treat depression for patients with a history of postural hypotension	3.26	May worsen postural hypotension and cause falls	SSRI, with monitoring of blood pressure	94
Long-term prescription of triazolam to treat insomnia	3.23	May cause cognitive and behavioural abnormalities	Nondrug therapy or low dosage of short half-life benzodiazepine	91
Prescription of chlorpromazine to treat psychosis for patients with a history of postural hypotension	3.22	May worsen postural hypotension and cause falls	High-potency neuroleptic such as haloperidol, with blood-pressure monitoring	94
Prescription of nylidrin, niacin, or pentoxifylline to treat dementia	3.16	Ineffective treatment for dementia and moderate risk of side effects	Discontinue	81
Prescription of tricyclic antidepressant with active metabolites (eg. imipramine or amitriptyline) to treat depression	3.12	May cause anticholinergic side effects	Tricyclic antidepressant without active metabolites or SSRI	91
Prescription of methylphenidate to treat depression	3.11	May cause agitation, stimulation of central nervous system and seizures	SSRI or short half-life tricyclic antidepressant without active metabolites	81

Inappropriate practices in prescribing NSAIDs and other analgesics for elderly people

Practice	Mean clinical significance rating (1 to 4)	Risk to patient	Alternative therapy	% of panel members who agreed with alternative
Long-term prescription of NSAIDs to treat osteoarthritis for patients with a history of peptic ulcer	3.78	May cause recurrence of peptic ulcer	Nondrug therapy or acetaminophen or NSAID with gastroprotective agent	97
Prescription of phenylbutazone to treat chronic osteoarthritis	3.69	May cause bone-marrow depression	Acetaminophen or intermittent dosage of an NSAID of another class	100
Prescription of ASA to treat pain for patients already receiving warfarin	3.61	May cause increased bleeding	Acetaminophen	91
Long-term prescription of meperidine or pentazocine for pain	3.58	May cause falls, fractures, confusion, dependency, and withdrawal	Stepped approach involving nondrug therapy, then acetaminophen, then codeine, morphine, or hydromorphone if needed	91
Long-term prescription of NSAIDs to treat osteoarthritis for patients with chronic renal failure	3.56	May worsen renal failure, may cause salt and water retention	Nondrug therapy, then acetaminophen	97
Prescription of NSAIDs to treat osteoarthritis for patients already receiving warfarin	3.56	May cause increased bleeding	Nondrug therapy or acetaminophen or NSAID with gastroprotective agent	81
Long-term prescription of NSAIDs to treat osteoarthritis for patients with a history of heart failure	3.38	May cause salt and water retention, may worsen heart failure	Nondrug therapy or acetaminophen or close monitoring of heart failure	97
Long-term prescription of piroxicam, ketorolac, or mefenamic acid to treat pain	3.35	Greater risk of upper gastrointestinal-tract bleeding than that associated with other NSAIDs	Nondrug therapy or acetaminophen; switch to a different NSAID or to codeine	81
Long-term prescription of NSAIDs for patients with a history of hypertension	3.34	May cause salt and water retention and exacerbation of hypertension	Nondrug therapy, acetaminophen or ASA, or close monitoring of blood pressure	91
Long-term prescription of indomethacin to treat gout	3.32	May cause gastropathy, neurologic side effects, and salt and water retention	Allopurinol or intermittent dosage of NSAID as needed	50
Long-term prescription of NSAIDs to treat osteoarthritis	3.22	May cause gastropathy, bleeding, and salt and water retention	Acetaminophen	100

Inappropriate practices in prescribing miscellaneous drugs for elderly people

Practice	Mean clinical significance rating (1 to 4)	Risk to patient	Alternative therapy	% of panel members who agreed with alternative
Prescription of cimetidine to treat peptic ulcer for patients already receiving warfarin	3.47	May inhibit warfarin metabolism and increase the risk of bleeding	Other histamine (H ₂)-receptor antagonist	84
Prescription of anticholinergic or antispasmodic drugs to treat irritable bowel syndrome for patients with dementia	3.41	May worsen cognitive and behavioural function	Nondrug and diet therapy, calcium-channel blocker to treat diarrhea	69
Prescription of dipyridamole to prevent stroke	3.30	Ineffective	ASA Ticlopidine	94 69
Long-term prescription of orally administered steroids to treat COPD for patients with a history of NIDDM	3.25	May worsen NIDDM	Inhaled steroids and bronchodilators with monitoring of blood glucose levels	97
Prescription of anticholinergic drugs to prevent extrapyramidal effects of antipsychotic drugs	3.16	May cause agitation, delirium, and impaired cognition	Decreased dosage of antipsychotic drugs or reassessment of need for these drugs	97
Long-term prescription of diphenoxylate to treat diarrhea	3.13	Drowsiness, cognitive impairment, and dependence	Nondrug and diet therapy or loperamide	84
Prescription of cyclobenzaprine or methocarbamol to treat muscle spasms	3.06	Drowsiness, agitation, and disorientation	Nondrug therapy (physiotherapy, application of heat and cold or TENS)	94