Medications with Increased Risk for Elderly People

AN 80-YEAR-OLD MAN returns to the assisted living (AL) facility after a hospitalization for a fall. He had received some physical therapy in the hospital and was recovering nicely. A pharmacist expressed a concern to the primary care doctor about stopping low-dose amitriptyline because of its anticholinergic side effects. Should the medication be stopped? After quickly reviewing the ACE Card for assistance, one realizes a framework to approach this decision.

ACE Cards ™

Medications with Increased Risk for the Elderly

Acute Care for the Elders (ACE) Program
Aurora Sinai Medical Center/UW Medical School of Medicine & Public Health

Medications of Risk	Concerns	Alternatives
Long acting benzodiazepines Diazepam Flurazepam Chlordiazepoxide	Prolonged half-life (up to several days). Confusion, oversedation, falls, & increased mortality.	Short acting benzodiazepines: Lorazepam 0.5-1mg prn anxiety Temazepam 7.5mg prn insomnia
Tricyclic antidepressants, tertiary amines Amitriptyline Doxepin Imipramine	**Anticholinergic effects:** Confusion, oversedation, orthostasis, falls, urinary retention, constipation, increased intraocular pressure, & cardiac arrhythmias.	**Depression:** Consider SSRI. Avoid fluoxetine. Nortriptyline (low dose) **Neuropathic pain** Gabapentin Nortriptyline (low dose) Duloxetine
Conventional antipsychotics Chlorpromazine Thioridazine Haloperidol	**Anticholinergic effects:** See above. **Extrapyramidal effects (EPS):** bradykinesia/akinesia, stiffness, cogwheel rigidity, akathisia, & tardive dyskinesia.	Behavioral approach. Haloperidol 0.5-1mg, - Least anticholinergic. Risperidone 0.5-1mg, - LeastS.
Antihistamines Diphenhydramine Hydroxyzine	**Anticholinergic effects:** See above.	Loratadine Fexofenadine Cetirizine
Antiemetics, Phenothiazines Promethazine Prochlorperazine Trimethobenzamide	**Anticholinergic effects:** See above. **Extrapyramidal effects (EPS):** See above.	Treat underlying cause. Prochlorperazine 5mg IV for a short length of therapy only. Contraindicated in Parkinson's disease pts. Ondansetron 2mg IV

References:
1. *Fick DM, Cooper JW, Wade WE, et al. Updating the Beers criteria for potentially inappropriate medication use in older adults. Arch Intern Med 2003; 163:2716-2724.*
2. *Chutka DS, Takahashi PY, Hoel RW. Inappropriate medications for elderly patients. Mayo Clin Proc 2004;79: 122-139.*

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Medications of Risk	Concerns	Alternatives
Analgesics ***NSAIDs*** Ibuprofen Naproxen Indomethacin Ketorolac ***Opiates*** Propoxyphene → Meperidine →	**NSAIDs:** GI bleed (especially with concurrent anticoagulants or prednisone), nephrotoxicity, hyperkalemia, fluid retention, increased BP, CNS effects. **Opiates:** Confusion, oversedation, & constipation. Decreased balance, falls, CNS → depression. Few additional benefits vs. APAP alone. Potentially toxic metabolites. →	APAP 0.5-1g TID scheduled May add codeine 15mg or oxycodone 5mg Celecoxib 100mg BID for short-term therapy APAP, codeine, or oxycodone (see doses above) Morphine sulfate 1-2mg IV q2h PRN Hydromorphone 0.1-0.2mg IV q2h PRN
GI/GU antispasmodics Dicyclomine Hyoscyamine Oxybutynin Tolterodine	**Anticholinergic effects:** Confusion, oversedation, orthostasis, falls, urinary retention, constipation, increased intraocular pressure, & cardiac arrhythmias.	Behavioral approach Use lowest dose possible, for short length of therapy. Long-acting oxybutynin and tolterodine are safer alternatives.
Muscle relaxants Carisoprodol Cyclobenzaprine	**Anticholinergic effects:** See above. Also, prolonged half-lives.	Avoid if possible. Consider physical therapy. Lidocaine patch
Ferrous sulfate at doses greater than 325mg daily	Increased risk of constipation with a minimal increase in efficacy.	If high doses needed, add a stool softener such as docusate.
Digoxin at doses greater than 0.125mg daily for heart failure	Arrhythmias, anorexia, nausea, vision changes, & confusion.	Use 0.125mg daily Monitor for signs and symptoms of toxicity. Monitor levels.
Nitrofurantoin if Cr_{CL} is less than 50 ml/min	Increased risk of peripheral neuropathy. Less effective when Cr_{CL} is less than 30 ml/min.	Consider other antibiotics if sensitivities allow.

This card is not intended as a substitute for clinical judgment.

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This ACE (Acute Care for the Elderly) Card™ on *Medications with Increased Risk for Elderly People* was developed by Dr. Michael Malone at Aurora Health Care in Milwaukee, WI. These geriatric care reminder cards will be published in *ALC* as resources to help clinicians manage common conditions that plague elderly patients. The complete series of cards can be ordered from Dr. Malone at Michael.Malone.MD@aurora.org. ALC

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