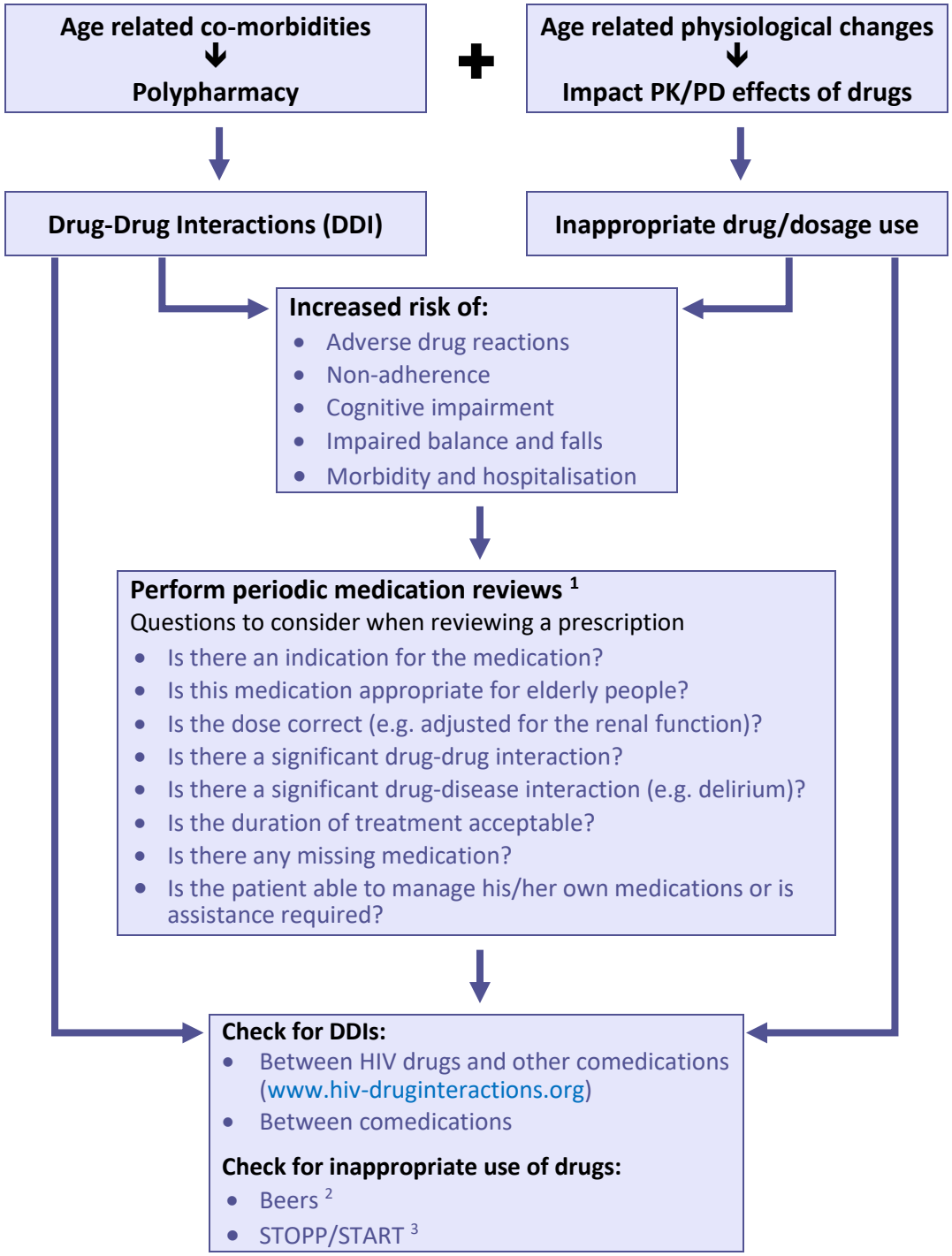
Prescribing in Elderly PLWH

Reviewed October 2022



*The **Beers** and **STOPP** criteria are tools established by experts in geriatric pharmacotherapy to detect and reduce the burden of inappropriate prescribing in elderly. Inappropriate medicines include:*

- *Those which in elderly persons with certain diseases can lead to drug-disease interactions.*
- *Those associated with a higher risk of adverse drug reactions in the elderly.*
- *Those that predictably increase the risk of falls in the elderly.*
- *Those to be avoided in case of organ dysfunction.*

*The **START** criteria consist of evidence-based indicators of potential prescribing omission in elderly with specific medical conditions.*

References

1. Reconsidering medication appropriateness for patients late in life. Holmes HM et al. *Arch Intern Med*, 2006, 166(6): 605-9.
2. American Geriatrics Society 2019 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. American Geriatrics Society Beers Criteria Update Expert Panel. *J Am Geriatr Soc*, 2019, 67(4):674-694.
3. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. O'Mahony D et al. *Age Aging*, 2015, 44(2):213-8.

Top Ten Drug Classes to Avoid in Elderly PLWH

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Drug class	Problems	Alternatives
First generation antihistamines e.g., Clemastine Diphenhydramine Doxylamine Hydroxyzine	Strong anticholinergic properties, risk of impaired cognition, delirium, falls, peripheral anticholinergic adverse reactions (dry mouth, constipation, blurred vision, urinary retention).	Cetirizine Desloratadine Loratadine
Tricyclic antidepressants e.g., Amitriptyline Clomipramine Doxepin Imipramine Trimipramine	Strong anticholinergic properties, risk of impaired cognition, delirium, falls, peripheral anticholinergic adverse reactions (dry mouth, constipation, blurred vision, urinary retention).	Citalopram Escitalopram Mirtazapine Venlafaxine
Benzodiazepines Long and short acting benzodiazepines e.g., Clonazepam Diazepam Midazolam Non-benzodiazepines hypnotics e.g., Zolpidem Zopiclone	Elderly are more sensitive to their effect, risk of falls, fractures, delirium, cognitive impairment, drug dependency. Use with caution, at the lowest dose, and for a short duration.	Non-pharmacological treatment of sleep disturbance/sleep hygiene
Atypical antipsychotics e.g., Clozapine, Olanzapine, Quetiapine	Anticholinergic adverse reactions, increased risk of stroke and mortality (all antipsychotics).	Aripiprazole Ziprasidone
Urological spasmolytic agents e.g., Oxybutynin, Solifenacin, Tolterodine	Strong anticholinergic properties, risk of impaired cognition, delirium, falls, peripheral anticholinergic adverse reactions (dry mouth, constipation, blurred vision, urinary retention).	Non-pharmacological treatment (pelvic floor exercices)
Stimulant laxatives e.g., Senna, Bisacodyl	Long-term use may cause bowel dysfunction.	Fibre Hydration Osmotic laxatives
Non-steroidal anti-inflammatory drugs (NSAIDs) e.g., Diclofenac, Indomethacin, Ketorolac, Naproxen	Avoid regular, long-term use of NSAIDs due to risk of gastro-intestinal bleeding, renal failure, worsening of heart failure.	Paracetamol Weak opioids
Cardiac glycosides Digoxin (>0.125 mg/day)	Avoid doses higher than 0.125 mg/day due to risk of toxicity.	Beta-blockers (for atrial fibrillation)
Long acting sulfonylureas e.g., Glyburide, Chlorpropamide	Can cause severe prolonged hypoglycaemia.	Metformin or other antidiabetic classes
Cold medications Most of these products contain antihistamines (e.g., diphenhydramine) and decongestants (e.g., phenylephrine, pseudoephedrine)	First generation antihistamines can cause central and peripheral anticholinergic adverse reactions (as described above). Oral decongestants can increase blood pressure.	Avoid

Refer to Beers criteria for a more exhaustive list:

American Geriatrics Society 2019 updated AGS Beers Criteria for potentially inappropriate medication use in older adults.
2019 American Geriatrics Society Beers Criteria Update Expert Panel. *J Am Geriatr Soc, 2019, 67(4):674-694.*

Common Prescribing Cascades to Avoid in Elderly PLWH

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Initial treatment	Adverse drug reaction	Subsequent treatment
ACE inhibitors	Cough	Cough suppressant; antibiotic
Amlodipine	Edema	Diuretics
Antihypertensives	Dizziness	Prochlorperazine
Antipsychotics	Extrapyramidal effect	Antiparkinsonian agents
Beta-blockers	Depression	Antidepressants
Cholinesterase inhibitors	↗ Incontinence	Anticholinergics
	→ Diarrhoea	Bismuth subsalicylate
	↘ Rhinorrhoea	Diphenhydramine
Erythromycin	Arrhythmia	Antiarrhythmics
Lithium	Tremor	Propranolol
Meperidine	Delirium	Antipsychotics*
Metoclopramide	Extrapyramidal effect	Antiparkinsonian agents
NSAIDs	Rise in blood pressure	Antihypertensives
Quinolone	Delirium	Antipsychotics*
SSRI; SNRI	Tremor	Benzodiazepines
Thiazide diuretics	Hyperuricemia; gout	Allopurinol; colchicine
Tricyclic antidepressants	↗ Decreased cognition	Cholinesterase inhibitors*
	↘ Constipation	Laxatives

ACE = angiotensin-converting enzyme
NSAID = nonsteroidal anti-inflammatory drug
SNRI = serotonin-norepinephrine reuptake inhibitor
SSRI = selective serotonin reuptake inhibitor

** Subsequent treatment could result in a further prescribing cascade*

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