Polypharmacy in the Geriatric Population

POLYPHARMACY is prescription of ≥5 medications. It is associated with mortality, falls, hospitalizations, and functional and cognitive decline.

DEPRESCIBING

- All medications and supplements to be presented to their primary care provider at each visit for medication reconciliation (St. Luke's "Blue Bag" for patients)
- Providers must do medication reconciliation at every office visit.
- Check OTC meds and supplements as well.
- Check possible Drug-Drug Interactions
- Consider Prescribing Cascade

PRESCRIBING CASCADE

Drug 1 -> ADR (misinterpreted as new medical condition) -> Drug 2 (misinterpreted as new medication condition)

Examples:

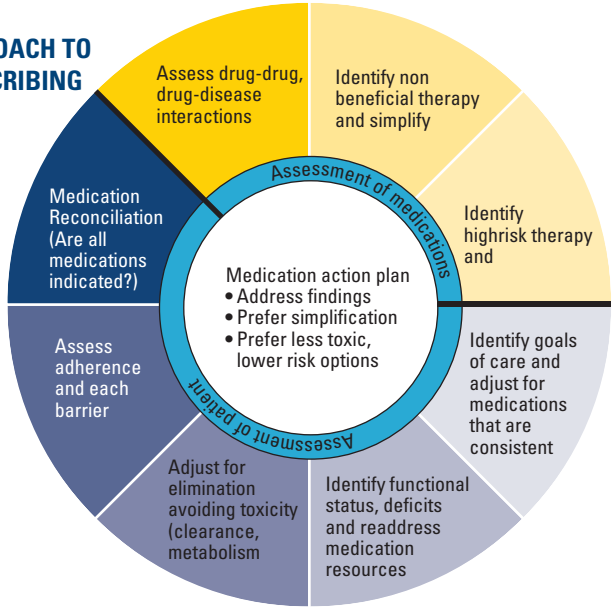
Metoclopramide -> Parkinsonism -> Antiparkinson medications

Calcium channel blockers -> Peripheral edema -> Diuretics

Donepezil -> Incontinence -> Oxybutynin -> Hallucinations -> Antipsychotics

COMBINATION	RISK
ACEI+ potassium sparing diuretic	Hyperkalemia
Anticholinergic + anticholinergic	Cognitive decline
Calcium channel blockers + erythromycin or clarithromycin	Hypotension and shock
Concurrrent use of ≥3 CNS active drugs	Falls and fractures
Digoxin + erythromycin, clarithromycin, or azithromycin	Digoxin toxicity
Lithium + thiazide diuretics/ACEI/ARBs/NSAIDs	Lithium toxicity
Peripheral alpha1 blockers + loop diuretics	Urinary incontinence in women
Phenytoin + SMX/TMP	Phenytoin toxicity
Sulfonylurea + SMX/TMP, ciprofloxacin, levofloxacin, erythromycin, clarithromycin, azithromycin, and cephalexin	Hypoglycemia
Tamoxifen + paroxetine (or other CYP2D6 inhibitors)	Reduced clinical effectiveness of tamoxifen
Theophylline + ciprofloxacin	Theophylline toxicity
Trimethoprim(alone or as SMX/TMP) + ACE inhibitor or ARB or spironolactone	Hyperkalemia
Warfarin + SMX/TMP, , ciprofloxacin, levofloxacin, gatifloxacin, fluconazole, amoxicillin, cephalexin and amiodarone	Bleeding
Warfarin + NSAIDs	GI bleeding

AN APPROACH TO DE-PRESCRIBING



USEFUL TOOLS FOR DEPRESCRIBING

Anticholinergic burden calculator *ACB Calculator*

Beer's List *American Geriatrics Society 2023 updated AGS Beers Criteria® for potentially inappropriate medication use in older adults (wiley.com)*

STOPP/START *STOPP/START criteria for potentially inappropriate prescribing in older people: version 3 - PMC (nih.gov)*

Deprescribing.org *Deprescribing.org - Optimizing Medication Use*

Choosingwisely.org *Choosing Wisely: An Initiative of the ABIM Foundation*

MEDICATION	RECOMMENDATION	RATIONALE
Anticholinergics	Avoid	Increased risk of delirium and falls
Antipsychotics	Avoid in dementia when possible or use lowest possible effective dose	Increased risk of cardiovascular mortality and cognitive decline
Benzodiazepines	Avoid	Increased risk of sedation, falls, fractures, delirium, dependence.
Analgesia	Use acetaminophen (no more than total of 3 grams daily in elderly patients) and topical therapies as 1st line.	Avoid use of NSAIDs, opioids and tramadol Side effects HTN, renal disease, PUD, over-sedation, urinary and bowel retention, etc).
Acid-suppressive therapy	De-escalate treatment when able. Consider alternatives such as H2RAs (ie, famotidine)	PPIs associated with risk of C. difficile infection, osteoporosis, malabsorption and pneumonia
Antihypertensives	Target BP of <150/85 Avoid use of ARB+ ACEI. Consider de-escalating diuretics and DHP CCBs with signs of orthostasis.	Risk of hypotension, peripheral edema and electrolyte abnormalities, falls
Anti-glycemic agents	Goal HbA1c 8.0-9.0% Limit the combination of insulin and insulin secretagogues	Risk of hypoglycemia administration error, falls