Aging

Many geriatric patients are at risk for adverse outcomes & treatment complications. Preventable adverse drug reactions constitute 80% of all adverse-drug-reaction hospital admissions. Comprehensive medication reconciliation is critical to reduce medication errors and ensure patient safety.

### MEDICATION MANAGEMENT

**Key Teaching Points for EM Faculty**

**Addresses Medication Management Competencies**

- Drug
- MEDICATION
- MANAGEMENT

Warfarin + ABX

INR

ACEIs

or

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Absorption

Addresses

Management

Competencies

- Digoxin

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- Clopidogrel (Plavix) + Proton Pump Inhibitors (e.g., Prilosec) contributes to ↑ MI, CVA risk

### Important Drug-Drug Interactions

- Warfarin + NSAIDs; ABX (sulfa; macrolides; quinolones) \(\rightarrow\) increased INR
- ACEIs + K supplements or spironolactone or NSAIDs contributes to risk of hyperkalemia
- Digoxin + amiodarone contributes to ↑ digoxin level
- Digoxin + verapamil contributes to ↑ risk of heart block
- Antipsychotics alone & with quinolone antibiotics contributes to ↑ prolonged QT, sudden death
- Clopidogrel (Plavix) + Proton Pump Inhibitors (e.g., Prilosec) contributes to ↑ MI, CVA risk

### Important Drug-Disease Interactions

- COPD + long acting benzodiazepines contributes to ↑ risk of confusion, respiratory depression
- CHF + rosiglitazone; pioglitazone; NSAIDs; Na-containing drugs; disopyramide contributes to ↑ CHF
- Peptic Ulcer Disease + NSAIDs (excluding COX2 inhibitors) or ASA (> 325 mg) contributes to ↑ risk GI bleeding
- Cognitive impairment + barbiturates; anticholinergics; antipsasmodics; muscle relaxants contributes to increased confusion
- Parkinson's Disease + dopamine blockers – metoclopramide, neuroleptic agents contributes to Parkinsonian motor symptoms
- HTN: Pseudoephedrine; diet pills; amphetamines cause accelerated hypertension

### Drugs To Be Avoided Or Dose-Reduced

- Haloperidol - doses for delirium with agitation, start 0.25-0.5mg q 6 hours; IM, PO preferred
- Digoxin - do not to exceed 0.125 mg/day, except when treating acute atrial arrhythmias
- Diphenhydramine – avoid due to ↑ sedation and confusion, except when treating emergency allergic reactions
- Long-acting benzodiazepines (e.g., diazepam , temazepam) cause excessive sedation, falls
- Muscle relaxants (e.g., cyclobenzaprine , carisoprodol) cause increased sedation and weakness; questionably efficacy
- Tricylic antidepressants (e.g., amitriptyline \(\rightarrow\) anticholinergic) which cause sedation, confusion, falls, urinary retention
- Antipsasmodics (e.g., dicyclomine , oxybutynin) ↑ anticholinergic; questionable efficacy
- Analgesics (e.g., propoxyphene & meperidine) can cause ↑ risk of confusion; propoxyphene efficacy similar to APAP; meperidine contributes to ↑ seizure risk, particularly with renal impairment
- NSAIDs may contribute to ↑ risk GI bleed, renal failure

### Tips for Geriatric Medication Prescribing in the ER

- Review all medications on ER admission (including supplements & OTC)
- Assess patient compliance with medication regimen
- Screen for cognitive impairment (delirium, dementia, depression)
- Assess whether the patient’s symptom(s)/problem(s) is/are caused by use, underuse, or interactions between one or more of medications
- Avoid “prescribing cascades” (treating one medication’s side effects with another medication)
- Calculate GFR, rather than relying on Cr as a measure of renal function
- Review new drug addition for significant drug-drug interactions and drug-disease interactions
- Start low and go slow!
- Be aware of medication’s therapeutic window; obtain drug levels for drugs w/narrow toxic/therapeutic index (e.g., digoxin and dose-effects)
- Discuss & give the patient a written list of medications, including those that are clearly marked as new or discontinued
- Communicate with patient, family, and other care providers to assist in medication compliance
- Enlist the help of the pharmacist for questions of medication adherence and affordability

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**References**


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