AGING PHARMACOLOGY

PRINCIPLES OF DRUG PRESCRIBING IN HOSPITALIZED ELDERLY PATIENTS

Admission:
Review all medications (include relevant OTC, herbal, vitamins, etc) taken by patient prior to hospitalization; assess previous compliance

Avoid unnecessary polypharmacy by:
- Using drugs that treat more than one condition (e.g., beta-blockers for both hypertension and angina pectoris) when practical.
- Discontinue drugs unnecessary in hospital, e.g., urinary antispasmodic when catheter has been placed.

Safe prescribing habits:
When initiating a new medication:
- Choose agents whose pharmacokinetic properties in elderly patients are known.
- Begin with a short-acting agent but by discharge convert to an agent that is given once or twice daily in order to enhance patient compliance and reduce caregiver burden at home.
- If patients require multiple medications, avoid, whenever possible, drugs that are inhibitors or inducers of Cytochrome P450 hepatic metabolism, or are highly bound to albumin. Examples: ceftriaxone, diazepam, lorazepam, phenytoin, valproic acid, warfarin. If in doubt, consult a pharmacist, on-line pharmacology program, or text source.
- When the maintenance dose of a medication is not established, “start low and go slow”, to allow time to titrate the dose against the desired clinical effect.
- Use lower than usual maintenance doses of medications that are renal excreted (e.g. digoxin).

Adverse drug events (ADE’s):
Anytime a patient develops new or unexplained medical problem consider ADE as a cause: e.g. delirium, hypotension, arrhythmias, renal failure, electrolyte disorders, constipation.

At time of discharge:
- Review medications that were taken by patient prior to admission and evaluate which should be renewed on discharge.
- Review all discharge medications with the patient and family, and provide written instructions.

Prescribing Guidelines for the Elderly
1. When prescribing new medications review the following issues
   a) Is medication necessary? (i.e. is there a nonpharmacologic treatment?)
   b) Determine therapeutic endpoints
   c) Assess: risks vs benefits
   d) Can one medication treat more than one condition?
   e) Administration time matches existing medicines?
2. Identify all drugs by generic name and drug class
3. All drugs prescribed should have clinical indications.
4. Know the side effect profile of drugs you prescribe
5. Understand aging pharmacokinetics and how to decrease ADE’s
6. Stop all drugs without known benefit
7. Stop all drugs without clinical indication
8. Always attempt to substitute less toxic drug
9. Avoid negative prescribing cascade (i.e. treating one ADE with another drug)
10. Brown Bag inventory (Annual or biannually)
    - Request assistant go thru OTC’s, Creams and “left over” meds. and record for you. (Why? 25 % of prescription drugs not recorded)
    - Most effective is coincides with annual major check-ups.
    - Reception staff to automatically remind patient when they schedule appointments to bring in all medications for a Brown Bag inventory.
    - Offer to throw away outdated and unused meds.
11. Follow these axioms:
    “One disease, One drug, Once a day”
    “Go-Low, Go-Slow” (start with ½ usual dose, take twice the time to increase)
    “Fix the CAN’T’s” (read, afford, open, remember, swallow)
For more explanation see: Web site: geriatrics.unmc.edu click on Geri Pearls evv4/28/11