## Clinical Considerations

- Consider new symptom may be a side effect rather than a new diagnosis/disease
- Get an accurate list of meds—include over-the-counter drugs and nutraceuticals
- Does benefit clearly outweigh the risk of an additional med?
- Use non-pharmacologic means whenever possible
- **Start low go slow... but get there**
- **Dose for aging physiology**
  - V<sub>1</sub> changes - ↑ % body fat, ↓ lean body mass and ↓ total body water
  - Excretion - ↑ GFR, tubular secretion, and renal blood flow
  - Metabolism - ↓ hepatic blood flow and enzyme activity (CYP-450)
- **Reassess constantly** and stop medications whenever possible

## Beers Criteria (selected medicines/classes) - meds to avoid in elderly

- **Psych**
  - benzodiazepines – confusion, falls, ↑ risk of hip fracture by at least 50%
  - amitriptyline (TCAs) – anticholinergic, active metabolites, ↑ QTc
- **Pain**
  - NSAIDs – GI, HTN, CHF, and renal side effects
  - especially ketorolac and indomethacin
  - meperidine – toxic metabolite (seizures), anticholinergic, renal excretion
  - muscle relaxants – anticholinergic, falls
- **GI/GU**
  - H<sub>2</sub> Blockers – CNS effects including delirium
  - oxybutynin – anticholinergic, sedation, weakness, falls
- **CV**
  - metoclopramide – extrapyramidal effects/TD, delirium
  - spironolactone – contraindicated CrCl<30 ml/min, hyperkalemia
  - digoxin – (max 0.125 mg/day for CHF and caution with CKD) dig toxicity
- **Misc**
  - nitrofurantoin – contraindicated with CrCl<30 ml/min
  - glyburide – long T<sub>1/2</sub>, risk hypoglycemia (avoid CrCl <50 ml/min)
  - CaCB – constipation, urinary retention, LEE, relaxes LES
  - megestrol – increase thromboembolic events, w/ minimal effect on weight

## References