Deconstructing Polypharmacy

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Recognize this patient?

Mrs. Brown- 82 years young

- **Active Medical Problems**
  - Hypertension
  - Hyperlipidemia
  - Type 2 Diabetes
  - Peripheral edema
  - Osteoarthritis
  - Urinary incontinence
  - Constipation
  - Dementia

- **Medication List**
  - Lisinopril 20 mg daily
  - Furosemide 40 mg daily
  - Aspirin 325 mg daily
  - Lantus 60 units daily
  - Pantoprazole 20 mg daily
  - Atorvastatin 80 mg daily
  - Oxybutynin 5 mg twice daily
  - Risperidone 1mg twice daily
  - Naproxen 500 mg twice daily
  - Metformin 1000 mg twice daily
  - Glipizide 10 mg daily
  - Mirtazapine 30 mg at bedtime
  - Omeprazole 40 mg daily
  - Amlodipine 10 mg daily

Your reactions?

Why does polypharmacy matter?

Definitions

Polymedication

- Prescription of multiple medications to treat multiple conditions
- Not in and of itself a bad thing
- Creates risk for polypharmacy

Polypharmacy

- Prescription of unnecessary medication
- Often the result of poor communication or a prescribing cascade
- A significant problem

Scope of the Problem

- U.S. seniors are 13% of population but use 40% of all medication
- Number of medications prescribed per person has doubled in 20 years
- 67% of community dwelling seniors are on 5 or more medications
- 50% of hospitalized seniors are on 7 or more medications
- 50% of frail seniors are on 9 or more medications
- 50% of seniors combine prescription with OTC medications
- 50% of seniors take at least one unnecessary medication

- Polypharmacy is a significant contributor to morbidity and mortality
- Adverse drug events increase linearly with number of medications

At Risk Patients

- Seniors in general
- Frail patients- not all are elderly
- Patients with complex or multiple chronic diseases
- The chronically mentally ill
- SNF and Rest Home residents

Physical Consequences

- Weakness and Falls
- GI bleeds
- Impaired cognition
- Progression of CKD
- Sleep deprivation
- Urinary frequency and incontinence
- Fluid retention
- Malnutrition
- Xerostomia
- Constipation

Class-specific Issues

- Benzodiazepines- Delerium, Falls
- Oral Hypoglycemics- Hypoglycemia
- Statins- Myopathy, weakness
- NSAIDs- CKD, GI bleeding, Fluid Retention, Hypertension
- PPIs- Decreased absorption, potential ties to dementia and fractures
- Anticholinergics- Xerostomia, Constipation
- Antihypertensives- Falls

Practical Consequences

- Financial cost
- Managing refills
- Complexity of administration
- Compliance decreases as number of medications increases
- Medication mix-ups

Deprescribing

- Intentionally stopping medications or reducing dosages to improve health or reduce side effects
- The opposite of prescribing
- Something we should all be considering at every visit
- Our goal should be shorter medication lists as our patients age

Helpful Tools

AGS Beers Criteria

- Product of American Geriatrics Society
- Conceived in 1991 and last updated on best evidence in 2015
- Identifies medications at high risk of causing adverse side effects in seniors
- Used to identify potentially inappropriate medications
- Not meant to be used punatively or supersede clinical judgement in any particular patient, but sometimes is
- Not “good drug - bad drug” but “potentially appropriate – potentially problematic”

STOPP/START CRITERIA

- Developed to address the limitations of the Beers List
- More practical and may more accurately predict adverse drug effects
- Provide explicit, evidence based guidelines organized by organ system
- STOPP examples:
  - TCAs in Glaucoma
  - Loop diuretic in dependent ankle edema without CHF
  - Diltiazem in NYHA Class III or IV CHF
- Start examples:
  - Warfarin in chronic AFIB with CHADS score >3
  - Regular inhaled corticosteroids in moderate persistent Asthma
  - ACE Inhibitor in chronic heart failure

Deprescribing.org

- Provides valuable evidence-based deprescribing algorithms

How do I start deprescribing?

Step #1- Reconcile the Medication List

- Perhaps the most important step in the process
- Don’t assume you know what your patient is taking
- Have patient bring in all pill bottles- prescription and OTC
- Grouping medications by class can assist in visualizing problems

Step #2- Identify High Risk Medications

- Benzodiazepines and related agonists
- Oral Hypoglycemics
- Proton pump inhibitors
- NSAIDs
- Antipsychotics
- Anticholinergics
- Diuretics

- Pay attention to dosing- even if a patient needs a medication they may not need a maximal dose

Step #3- Identify Medications With Limited Efficacy

- Statins in the elderly
- Antihypertensives in the elderly
- Anticholinergics

Step #4- Choose What to Deprescribe

- Potentially harmful
- Causing side effects
- No clear indication
- No evidence of efficacy
- Unlikely to provide benefit in the patient's expected lifespan
- Would take a long time to be of benefit to the patient

"Does this patient still need this medication?"

Step #5- Go- Deprescribe!

- Not a one time event- a multi-visit process
- Consider it a PDSA cycle
- Evaluate the risks and benefits of your decision
- Deprescribe one or at most two medications at a time
- If you can’t remove a medication consider a dose reduction
- Re-evaluate regularly- by phone/web and in person

Now let's try it!

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Take Home Messages

- **Polypharmacy is present in 50% of older or high risk patients**
- **There are many physical and practical consequences**
- **Become familiar with available tools to identify potentially problematic medications**
- **Consider Deprescribing at each visit**
  - Reconcile medications
  - Identify potentially problematic medications
  - Deprescribe one at a time after assessing risks and benefits
  - Consider dose reduction if discontinuation is not possible
  - Follow-up

Questions?