

## Case 1

70yo man admitted to AIDS facility

After a hospital stay for CHF / inanition

CHF COPD AODM HIV / mild dementia

EF 25% / FEV<sub>1</sub> 0.8L / A1C 7 / Cr 2 / CD4 275 VL ud

Feels fine, ambulates with cane

Metoprolol 25 mg BID / Lisinopril 10 mg BID / spironolactone 25 mg QD / lasix 20 mg QD  
Amlodipine 10 mg QD / ASA 81 mg QD / Combivent MDI TID / KCl 10 MEQ QD /  
Donepezil 10 mg QD / Memantine 10 mg QD / Glyburide 10 mg BID / Atripla QD  
Tylenol / DOSS / Dulcolax / MOM

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## Drug Use is Disproportionate Among Older Persons

- >65 make up 12% of population; use 30% of medications
- > 40% of non-institutionalized elderly  $\geq 5$  meds
- 12% use  $\geq 10$  meds



## Geriatric HIV PolyPharmacy: Conflicts

- Vague feeling that some meds should be stopped (which ones - amlodipine?)
- Some should be added? (statin?)
- Surely must be drug-drug interactions?
- Likely to have ADE? side effects?
- Uneasy about cost / utilization implications in settings
- Vague worries about costs to patient, family, 'society'
- Formulary implications / Part D
- 'Inappropriate' meds in the elderly / or in guideline
- Potential harm from meds, harm from stopping meds

## Result of Conflicts = Paralysis

Action is inhibited by lack of knowledge of patient and their particular physiology.

And by Inertia.

Path of Least Resistance =

Carry forward whole list of medications as is and put the whole thing out of your mind.

If there is any group where concerns about poly-pharmacy have been addressed it is in HIV.

Fewer pills driven by compliance, international distribution.

## Aging Involves:

- Pharmacokinetic & Pharmacodynamic Changes
- Changes in Absorption have Little Clinical Impact in Older Persons
- Body Composition Changes Dramatically with Aging – lean body mass & body water decreases, fat rises then decreases
- Aging Effect on P binding and Liver Metabolism Less Clear
- Calculations of GFR Allow More Accurate Renal Dosing
- Many of our patients are aging into AIDS.

## ADEs & Interactions Receiving Increasing Attention

- Definition: injury resulting from the use of a drug or interaction
- In our patient: 12 meds ~ 12! = 479M potential interactions
- 27% preventable (underestimate?), 38% serious/life-threatening
- Errors: prescribing (58.4%)=wrong drug or known interaction, monitoring (60.8%)=inadequate, patient adherence= (21.1%)
- Med Categories: CV (24.5%), diuretics (22.1%), analgesics (15.4%), hypoglycemics (10.9%), anticoagulants (10.9%)
- Risk factors: female, age >80, Multi-morbidity, # scheduled meds
- Certain combinations have been shown to increase risk of ADEs
  - Anticholinergics, NSAIDs and steroids
- Medication Adherence Problems Large Contributor to ADEs

## Drugs to Avoid and Formularies: Beers List

- Published by Mark Beers in 1991, 97, 03 for LTC
  - Medications to avoid or use within specific dose & duration ranges
  - Medications to avoid in the elderly with specific co-morbidities
  - Not well-adhered to: in a cross sectional study of 150K patients from 10 HMOs in 2000, of 33 potentially inappropriate medications - **28.8% received one**, 5% “always avoid” 13% “rarely indicated” 17% “often misused” – same result as in 1996

Formularies force MD adherence

Similar common knowledge among HIV providers – renal complications of indinavir, tenofovir (our patient’s Creat Clearance ~ 30-35)

## Breaking the Logjam of Polypharmacy

- Circular thinking: no help – makes prescriber feel bad
- Patients should be on meds with proven benefit
- Ask patient or surrogate – want to reduce?
- **Start** low, go slow in starting or stopping
- Be aware of under-utilized / over utilized drugs via formularies, QI lists (Beers)
- Use clinical endpoints
- Palliative Approach / Comfort – reducing easier; gratifying when patients feel better
- Reductions may be formulary, guideline driven – accept and be prepared to stop meds